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## ORIGINAL ARTICLES.

### THE INDICATIONS FOR ALEXANDER'S OPERATION.<sup>1</sup>

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SINCE I performed my first Alexander's operation, on December 12, 1884—the first, I believe, done in this country—I have so often had occasion to express my views on this operation and to mention my growing experiences with it, that I scarcely feel that I can now add anything new to what I have already said and written on the subject. My riper experience, which now comprises 97 cases, confirms my previous observations and makes me a stronger believer than ever in the value of Alexander's operation for properly selected cases. What these cases are—that is, what are the proper indications for the operation?—seems to me perfectly clear. The indications are based on clearly drawn lines and are substantially the same as those originally formulated by Alexander. Briefly stated, they are the following:

1. Retroversion or retroflexion of the uterus of long standing where pessaries either do not maintain the uterus in position, are not retained, or cause pain.
2. Retroversion or retroflexion of long standing, associated with relaxation of the uterine supports (ligaments, pelvic floor, and vaginal walls) and consequent greater or lesser *descensus uteri*.
3. *Prolapsus uteri et vaginæ* where the Alexander's operation is preceded at the same sitting by trachelorrhaphy or amputation of the cervix, and is followed by anterior and posterior colporrhaphy and perineorrhaphy.
4. The desire of the patient to be *cured* of her displacement, a wish which no pessary or other non-operative treatment can fulfil.
5. The necessity for keeping the uterus in its normal anteverted and elevated position after the adherent fundus uteri and appendages have been loosened and restored to their normal mobility, either by bimanual tearing of the adhesions or by peeling the organs loose with the fingers through an incision in the posterior vaginal pouch and Douglas' cul-de-sac.

If the adhesions are broken without opening the cul-de-sac the uterus and appendages may be kept in the normal position and prevented from again becoming adherent by a sharply curved lever pessary. But when the cul-de-sac has been opened, only Alexander's operation, or one of the other surgical procedures by which the fundus uteri is kept elevated or anteverted, is practicable. Packing the posterior vaginal pouch with gauze would scarcely suffice to attain this object.

The *counter-indications* for Alexander's operation are:

1. Adhesion of the uterus or appendages.

*This is an absolute and positive counter-indication for Alexander's operation.*

2. The possibility of retaining the uterus and appendages in a normal position and of making the patient perfectly comfortable with a pessary, unless, of course, the patient insists on a *cure*, as already mentioned.

3. *Prolapsus uteri et vaginæ* of the second or third degree—that is, with the cervix down to or out of the vaginal orifice—unless the plastic operations referred to (anterior and posterior colporrhaphy and perineorrhaphy, and reduction of the weight of the uterus by trachelorrhaphy or amputation of the cervix) are performed at the same sitting. It is asking too much of the round ligaments to expect them to support the weight and traction of a large uterus and the vaginal walls, with bladder and rectum, without assistance from the inferior supports of these organs.

There is one objection to Alexander's operation, and that is, not the difficulty of finding the ligaments—for with the possible *very* rare exception of their absence (if, indeed, that occurs at all) or of their not following the usual course, they can *always* be found—but the impossibility of knowing beforehand whether the ligaments will be strong enough to be of actual service in suspending the uterus. That is a chance we have to take. There certainly are a number of cases (scarcely ten per cent., in my experience) where the ligaments are not much thicker than a large knitting-needle, and break when strong traction is made on them, or are too thin to be of much use. This is the only objection I know against Alexander's operation. The mortality, in

<sup>1</sup>Read before the Section on Obstetrics and Gynecology, New York Academy of Medicine, February 27, 1896.

my hands, has been *nil*. I have seen no hernia occur in the scar; only once temporary irritable bladder, and no other evil results.

A number of my cases have borne children afterward, some several, and the uterus has retained its normal position. In two cases of prolapsus (a bad indication) and in one of retroflexion the displacement returned, each time after childbirth. I have been informed of several of my cases which were seen by other physicians, where the retroversion had returned, and one case of inguinal hernia has been reported to me. But I think I am safe in claiming that of my 97 operations (several of which are still too recent to warrant conclusions) 87 were permanently cured.

I prefer Alexander's operation to ventral fixation: because it is safer (at least I claim that opening the peritoneal cavity can never be *entirely* free from danger); because it is more logical and rational to substitute a normal position of the uterus for an abnormal one, that by again putting that organ in an unnatural position as is done by sewing the fundus to the anterior abdominal wall; because shortening the round ligaments does not interfere with the progress of gestation, as I have known to be the case after ventral fixation in one of my 12 cases of the latter operation; and finally because, after ventral fixation, if the abdominal walls are thin and relaxed they are drawn inward and downward by the steady traction of the uterus, and the displacement returns. This remark applies chiefly to cases of prolapsus.

I am opposed on theoretical grounds to Mackenrodt's vaginal fixation, because it substitutes for a movable retroflexed uterus an immovable anteverted one. However, I have of late heard of good results from this operation in the hands of an entirely unbiased surgeon, and may be convinced in time that it is not as illogical as it has appeared to me to be.

In Germany, the birthplace of this operation, its popularity seems already to be on the wane. Leopold, of Dresden, on Dec. 9, 1895 (*Centralbl. für Gyn.*, Feb. 8, 1896), pronounces against it in favor of ventral fixation on very much the same grounds on which I base my disapproval; and in the same number of the *Centralblatt* I find an article by Rühl, of Eibach-Dillenburg (a to me unknown, but certainly rural, locality), who boasts of 235 Mackenrodt operations (*sic*, in a country practice), but feels, in candor, compelled to report: five cases of dystocia following the operation performed by himself; three of difficult version; one of perforation, and one of

forceps, the two last only after incising the anterior lower segment of the anteverted uterus, both children being dead. In all cases the extreme anteversion of the uterus, and the difficulty in reaching the external os in the sacral excavation, together with a firm cicatricial ring in the anterior segment of the uterus, were the causes of dystocia. Besides, Strassmann and Graefe each report a case of cesarian section, after Mackenrodt's operation, made necessary in consequence of the above-mentioned obstacles to delivery.

I do not think that any such objections can be advanced against Alexander's operation, or even against ventral fixation.

#### THE INDICATIONS FOR VENTRAL FIXATION OF THE UTERUS.<sup>1</sup>

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RECENT literature, or, more correctly speaking, events reported in the recent literature, have greatly modified the indications for the several retroversion operations. The discussion of the relative merits of these operations must now be carried to a higher plane than that of mere technique and of immediate and remote anatomical results. Their greater or less interference with the functions proper of the uterus, child-bearing and childbirth, constitutes the higher standard by which they must be judged.

Let us first, then, review the evidence now in as regards pregnancies following *vaginæ-fixura uteri*, *ventri-fixura uteri*, and shortening of the round ligaments, the three operations under discussion this evening.

1. *Pregnancy following vaginal fixation of the uterus*.—Strassmann<sup>2</sup> has recorded the following disturbances of pregnancy: (a) Disorders and pain in the vaginal cicatrix (Dührssen, 6 cases). (b) Abortions; 25 per cent. at least in Dührssen's cases; over 27 per cent. in his own. (c) Vesical pain and disturbances of micturition. The literature of the past few months records the following serious complications and disasters of parturition: 1. (Strassmann.<sup>3</sup>) Transverse presentation; prolapse of funis; very difficult version due to abnormal conditions established by vaginal fixation; severe post-partum hemorrhage; rupture at site of cicatrix. 2. (Strassmann.<sup>4</sup>) Delivery per

<sup>1</sup> Read before the Section on Obstetrics and Gynecology, New York Academy of Medicine, February 27, 1896.

<sup>2</sup> *Ges. f. Geb. u. Gyn. zu Berlin*, Oct. 25, 1895.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

vaginam impossible; cervix above promontory of sacrum and pointing upward; Porro operation; rupture of vagina; death from intraperitoneal hemorrhage 1½ hours after operation. 3. (Graefe.<sup>1</sup>) Transverse presentation; cervix above pelvic brim and directed upward; version impossible; cesarian section. 4. (Wertheim.<sup>2</sup>) Version rendered necessary, as well as exceedingly difficult and dangerous, by same conditions as in Strassmann's and Graefe's cases. 5. Rühl<sup>3</sup> reports 235 vaginal fixations performed by himself, with 12 subsequent pregnancies. In three of these the vaginal fixation necessitated version, which was performed successfully for mother and child. The remaining two required bloody incision of the vaginal cicatrix, and one of them craniotomy in addition, before delivery could be effected, the second child also being lost.

The three things common to all of the above cases were: the abnormal position of the cervix above the pelvic brim and pointing upward, the undue expansion and dangerous thinning of the posterior uterine wall, and the firm fixation of the immensely hypertrophied anterior wall in the pelvis, the latter condition constituting the obstacle to delivery. These conditions are all, beyond question, chargeable to the vaginal fixation; I have purposely refrained from citing other disturbances of pregnancy attributed to vaginal fixation, the interpretation of which might be open to doubt. In the discussion following the reading of Strassmann's paper other cases of serious disturbances of pregnancy and parturition were brought to light, and anxiety was expressed for the ultimate fate of the already numerous victims of the yet young operation. Bockelmann estimated that there were in Berlin alone about one thousand women with the dire possibilities of vaginæ-fixura gestation and delivery ahead of them. In New York there are perhaps two hundred such unfortunates. Who will dare to add to their number? With the evidence now in, I would neither perform, nor sanction in consultation, vaginal fixation in a woman liable to future pregnancies, with one possible exception only, to be mentioned later. Dr. Vineberg, in a paper on "Conservative Surgery upon the Uterus and Adnexa by the Vaginal Route," read a few evenings ago, cited 42 cases in point, in 34 of which he performed vaginal fixation in retreating from his conservative attack upon the uterus, tubes, and ovaries. In view of recent developments regarding vaginæ-fixura pregnancies shall we hope, or

shall we not, that the conserved organs will functionate in these 34 cases? A literature on the pathology and treatment of vaginal-fixation pregnancies has already sprung up (Strassmann, Wertheim, Rühl).

Mackenrodt, the originator, or, perhaps more correctly, one of the originators and chief champions, of vaginal fixation, has formally disowned the operation, for the reasons just recorded. Unfortunately he has already adopted another unpromising child, *vesico-fixura uteri*. The only novelty about the latter operation is that Mackenrodt, and Staude before him, performed it per vaginam, while Werth in 1894, Pryor,<sup>4</sup> and more recently Westphalen, and perhaps others, have operated from above.

2. *Pregnancy following ventral fixation of the uterus.*—Milaender<sup>5</sup> has collected 54 confinements at term after ventral fixation, with 11 difficult labors—4 forceps, 2 cesarian sections, 2 podalic versions, 2 transverse presentations, 1 foot presentation. Of the whole number of pregnancies after ventral fixation, 74, collected by Milaender, 6 terminated in abortion, 3 by premature delivery, 10 were still pregnant at time of report, and 1 died. The death, however (one of my own cases), which was due to long standing valvular heart disease, occurred suddenly on the eve of confinement, and had absolutely nothing to do with the ventral fixation. Strassmann<sup>6</sup> reports two further cases of difficult labor after ventral fixation. Norris<sup>7</sup> reports a case in which the thickened uterine wall at the site of the ventral fixation proved an obstacle to delivery, rendering necessary cephalic version, with high Tarnier forceps, and resulting in the death of the child. Noble<sup>8</sup> asks for a collective investigation, stating that he has had some recent unfortunate experience concerning the influence of ventral fixation upon parturition.<sup>9</sup> My personal experience is negative as regards disturbances and difficulties of pregnancy and parturition following, and the result of, ventral fixation of the uterus. I have performed the operation 73 times. In 34 of these cases both ovaries and tubes were removed, 6 were unmarried, 7 over 40 years of age, leaving 26 patients more or less liable to pregnancy. Eight of these 26 have become pregnant with the following re-

<sup>1</sup> New York Obst. Soc., April 18, 1893.

<sup>2</sup> *Zeitschrift f. Geb. u. Gyn.*, Vol. XXXIII, No. 3.

<sup>3</sup> *Loc. cit.*

<sup>4</sup> *Am. Gyn. and Obst. Jour.*, Feb., 1896, p. 149.

<sup>5</sup> *Ibid.*, p. 213.

<sup>6</sup> In the discussion following the reading of this paper, Dr. Noble stated that in a case of pregnancy after ventral fixation he was obliged to do a Porro during labor at term, being unable to deliver *per vias naturales*. The woman died from sepsis antedating the Porro operation.

<sup>7</sup> *Monatsschrift f. Geb. u. Gyn.*, Vol. II, No. 6.

<sup>8</sup> *Centralbl. f. Gyn.*, 1896, No. 2.

<sup>9</sup> *Centralbl. f. Gyn.*, 1896, No. 5.



sults: One produced a miscarriage upon herself at the second month; one died of heart disease on the eve of confinement.<sup>1</sup> A third case died near term, septic from retention of a dead fetus aged 7 or 8 months. Drs. Hanks and Coe, under whose care the patient was delivered, inform me that her condition and death bore absolutely no relation to the previous ventral fixation. Five of the 8 cases, finally, were safely and easily delivered of living children at term, one of them by forceps. All were head presentations. The abortion and the two deaths in my cases are not attributable in any way to the preceding ventral fixation. Certain anomalies, however, have been common to all of my own cases and to many reported by others, of pregnancy following ventral fixation. I refer to the thickening of the uterine wall at the site of fixation, and the ballooning or compensatory dilatation of the posterior uterine wall. In a general way it may be said that, in pregnancy following ventral fixation, that part of the uterine wall anterior to and below the point of fixation thickens, while that part posterior to and above that point dilates, with the growth of the product of conception. The liability to abortion and disturbances of pregnancy and parturition after ventral fixation depends, theoretically at least, a great deal upon the particular technique adopted. The recent modification of the operation adopted by Kelly, who stitches the posterior uterine to the anterior abdominal wall, seems particularly illogical and unfortunate in this respect.

3. *Pregnancy after shortening of the round ligaments.*—A slight drawing pain beginning with the eighth month of pregnancy, and attributed, whether correctly or not, to traction upon the shortened ligaments, has been noted in a few cases. Beyond this, disturbances of pregnancy or parturition, *due in any way to the operation*, have not been observed in the numerous instances of conception following shortening of the round ligaments.

Applying to each of the three operations the crucial test of interference with the normal course of subsequent pregnancies, then, in accordance with the evidence above submitted, vaginal fixation must be discarded altogether in women liable to future pregnancies, ventral fixation must be viewed with strong distrust, while the results of shortening of the round ligaments will alone bear close scrutiny. I have dwelt thus long upon this, which to my mind is *the important aspect of*

the question, as it leads logically and unavoidably to two principles or propositions which cover a great part of the subject before us for discussion this evening:

1. Vaginal fixation of the uterus should never be performed *upon a woman liable to future pregnancies*, under any conditions, when ventral fixation or shortening of the round ligaments will meet the indications just as well or better. Personally, I have been guilty of only one vaginal fixation. This was performed upon a young girl suffering from adherent retroversion of the uterus, with normal tubes and ovaries. Ventral fixation was attempted, after separating the adhesions, and failed, as the fundus could not be brought up to the anterior abdominal wall, on account of firm fixation of the cervix by parametritis posterior. I closed the median incision and immediately shortened the round ligaments, hoping that measure would suffice to keep the fundus forward. A pneumococcus infection of both inguinal wounds caused both ligaments to slough and the uterus again fell backward. A few months later I performed vaginal fixation, with the result of relieving my patient of her symptoms, and of keeping the uterus, if not in ideal anteversion, at least in front of the promontory of the sacrum.

2. Neither vaginal fixation nor ventral fixation should be performed *upon a woman liable to future pregnancies*, for the cure of an uncomplicated retroversion of the uterus. This rule is subject to one exception only: In performing the operation of shortening the round ligaments one of the ligaments may tear close to or out of the uterus. Under these conditions the abdomen should immediately be opened in the median line and the uterus sewn to the abdominal wall, ventral fixation being the lesser of the two evils when compared with leaving the uterus held forward by but one round ligament. I have three times performed ventral fixation under this indication. The same indication for ventral fixation holds good if the shortened round ligaments should slough after operation, and the uterus as a result again falls backward.

The above rules are based upon the assumption that shortening of the round ligaments is in every respect the most physiological operation for cases of uncomplicated retroversion, with no adhesions of uterus, tubes, and ovaries. I am quite free to admit that an anatomical cure of retroversion can be obtained by each of the three operations—vaginal fixation, ventral fixation, and shortening of the round ligaments—in from 90 to 100 per cent. of cases, by a proper technique and

<sup>1</sup> Case alluded to above and reported in Trans. New York Obst. Soc., Nov. 21, 1893, and April 17, 1894.



a capable operator. Mackenrodt figures 10 per cent. of failures for vaginal fixation. Kellogg, who has probably had the largest individual experience in shortening the round ligaments, writes me: "I have done the operation a few more than five hundred times, and have had failures or partial failures in less than 5 per cent. of the cases." My own experience, embracing over one hundred cases, tallies with this. In ventral fixation there is no reason why the average operator should not obtain from 95 per cent. upward of anatomical cures. The quality of the cure, however, is an entirely different matter, especially to the patient. After a successful shortening of the round ligaments the physiological mobility of the uterus remains unimpaired. In pregnancy the shortened round ligaments undergo evolution and involution with the uterus. The more successful, however, a ventral or a vaginal fixation, the greater the abnormalities established within the patient's abdomen or pelvis. It is repugnant to every surgical instinct to create unnecessary adhesions within the peritoneal cavity.

An indication for ventral fixation that may be allowed by some, is inability of the operator to perform the operation of shortening the round ligaments. Others again will not admit this, and contend that in that case the surgeon should either learn how to do the operation or send his patient to some one who can. Personally, in view of the evidence now in favor of the operation, I consider it the duty of every one claiming to be a specialist in gynecology to make himself master of some method of shortening the round ligaments outside of the abdomen. Though Adams, one of the originators of the operation, said: "The operation is one that all and sundry cannot perform," I think that, with a knowledge of anatomy and a little practice upon the cadaver, any surgeon capable of doing a Bassini operation for the radical cure of hernia should be able to shorten the round ligaments successfully. Others have encountered the same difficulties and have mastered them in one way or another. Kellogg, after having performed 28 operations after Alexander's method, writes: "I am sure that had I not adopted a new method of performing the operation I should have felt it my duty to cease its performance." Kuester had abandoned the operation twice, when, stimulated by the examination of a successful case of Werth, he tried a third time and has become one of its most enthusiastic advocates. Mundé records his discouraging first experience, but with the courage of his convictions he persevered and

mastered the operation. The writer himself gave up the operation after five more or less, generally less, successful cases, and only resumed it six months later, after he had elaborated in the dead-house the technique of his method of shortening the round ligaments.

Another, and to the writer's mind a very important, indication for ventral fixation of the uterus is as an adjuvant in the performance of combined operations for the cure of prolapsus uteri et vaginae. It is in just these cases that I have derived the most unalloyed satisfaction from the operation, the necessary plastic work upon uterus, vagina, and perineum being supplemented by ventral fixation performed at the same sitting. I have performed ventral fixation upon this indication 16 times. Two of the patients became pregnant, and were safely delivered at term. Both remained cured of their former complete procidentia of the uterus and vagina when last seen, one four months and the other a year after confinement.

Another broad indication for ventral fixation of the uterus is as a closing procedure after operations upon the adnexa of such a character that the possibility of future pregnancy is excluded, as, for instance, when both ovaries and tubes are removed, the uterus being left. This indication will but rarely obtain with those who advocate and practice removal of the uterus whenever both tubes and ovaries must go. Those of us, however, who are not quite so radical, but who sometimes leave a uterus under these conditions, should make it a practice to attach the fundus to the abdominal wall in closing the incision of the latter. Without added risk we thereby insure permanent ante-position of the uterus.

Nearly in line with this indication is the performance of ventral fixation after operations in which tubes and ovaries, or at least one tube and ovary, are left, the uterus being unusually heavy. There is an unwillingness in some quarters to trust to shortening of the round ligaments to hold a heavy uterus forward. Personally, I am convinced that any uterus which is so heavy from chronic metritis that the shortened round ligaments cannot sustain it, had better be removed; and conversely, experience has taught me that uteri of even twice the normal weight are readily and permanently held forward by properly and sufficiently shortening the round ligaments.

We come now to a doubtful field, that of the operative treatment of adherent retroverted uteri, with appendages in good or fair condition. This

territory has until within the past few years been conceded to ventral fixation. In the course of time, however, various operators, the writer among the number, have learned how to deal successfully with this class of cases by applying to them shortening of the round ligaments. An incision is first made into the peritoneal cavity either through the posterior vaginal fornix or through the anterior abdominal wall, and all adhesions of the uterus, tubes, and ovaries are broken up. The incision through which this work has been done is then closed and the round ligaments shortened in the usual way. The writer has practiced this procedure a number of times by both the vaginal and the suprapubic route, but for reasons of technique, which this is not the proper occasion to enter upon, he prefers the suprapubic approach.

In this connection it might be mentioned that Kellogg, for reasons and with exceptions for which I must refer to his paper,<sup>1</sup> says: "From my present standpoint I would not think of performing the operation of ventral fixation without also shortening the ligaments, etc." I myself have never met, nor can I conceive, the case to which I would consider a combination of the two operations applicable.

Ventral fixation has been considered, even by some who ordinarily prefer Alexander's operation, as indicated in sharp retroflexion of the uterus. This indication, however, I cannot allow, since I have succeeded in curing the most aggravated cases of movable retroflexion by shortening the round ligaments.

There remains one indication for ventral fixation, which, as far as my knowledge goes, has as yet neither been mentioned nor acted upon. I refer to cases of uterus unicornis causing symptoms which, under certain conditions, cannot be relieved short of operation. The writer has at present under observation a young woman, married over a year, in whom coitus has never been consummated, owing to intense dyspareunia. On examination she presents a uterus unicornis lying transversely across the pelvis, the developed right half of the body lying upon the right linea innominata, and the cervix pointing to the left in the vagina. The diagnosis of uterus unicornis with rudimentary left horn was made by tracing the left tube to the junction of corpus and cervix. The tender left ovary lies immediately on top of the tilted cervix. The slightest pressure upward upon the latter causes the same intolerable pain which is experienced upon the entrance of the

male organ. Ventral fixation of the uterus, with perhaps removal of the left ovary, will probably cure. Shortening of the round ligaments is not applicable to uteri unicornis, the round ligament of the undeveloped side, with the tube, arising from the uterus at the level of the os internum.

In conclusion the writer begs to submit the following propositions:

1. Vaginal fixation of the uterus does not come within the sphere of legitimate operations in women liable to future pregnancy.
2. The indications for ventral fixation of the uterus should be limited to the utmost degree in women liable to subsequent pregnancy.
3. Ventral fixation is never indicated in uncomplicated retroversion of the uterus.
4. Inability of an operator to perform shortening of the round ligaments *may* be an indication for ventral fixation, but not in the case of one claiming to be a specialist in gynecology.
5. Ventral fixation is indicated, *as an adjuvant*, in the performance of combined operations for prolapsus uteri et vaginæ.
6. Ventral fixation is indicated as a closing step in all celiotomies in which the adnexa are removed and the uterus is left.

7. Ventral fixation *may* be indicated, *under exceptional conditions*, in cases of adherent retroversion, with tubes and ovaries in good condition.

8. Ventral fixation *may* be indicated in the most aggravated cases of uncomplicated sharp retroflexion. The writer has not met such a case not amenable to successful treatment by shortening the round ligaments.

9. Ventral fixation is indicated, under certain conditions, in cases of uterus unicornis.

The operation of ventral fixation of the uterus is also known as hysterorrhaphy, hysteropexy, ventro-fixatio uteri, ventri-fixatio uteri, ventri-fixura uteri, and suspensio uteri; altogether too many designations for one operation. Hysterorrhaphy means suture of the uterus itself, and not attachment of the uterus by suture to another tissue or organ. It is of parallel significance with trachelorrhaphy, and no more. Hysteropexy signifies attachment or fastening of the uterus, but does not specify to what it is attached. It may mean vaginal, vesical, ventral, or any other fixation of the uterus. Ventro-fixatio uteri is ungrammatical; *venter* is a noun of the third declension. A Latin word *fixatio* does not exist; therefore neither ventro-fixatio nor ventri-fixatio is allowable. Ventri-fixura is the only correct Latin designation; *fixura*, an obsolete noun (from *figere*, *fixum*), being preferable to *fixatio*, a coined noun.

<sup>1</sup> *Modern Medicine and Bacteriological Review*, 1894.

The name *suspensio uteri* has been recently applied by Kelly, who first proposed the term *hysterorrhaphy* to a slightly modified ventral fixation. Neither the modification of technique, however, nor the change of name commends itself to the writer. *Suspensio uteri*, hanging the uterus, might better apply to shortening of the round ligaments, after which operation the uterus is really *suspended* in normal anteversion. A Fellow recently related to the New York Obstetrical Society a case in which, misled by the term *suspensio uteri*, he had suspended the uterus free in the abdominal cavity by sutures passed through fundus and anterior abdominal wall, not, however, bringing the two together. Sutures an inch or more in length run free through the peritoneal cavity of that patient between fundus uteri and anterior abdominal wall. Truly, a little knowledge is a dangerous thing. The operator was quite surprised when informed that this was not Kelly's *suspensio uteri*, as a case of which he had reported it, but that he had unconsciously performed an original operation not likely to have either claimants for priority or imitators.

*Ventri-fixura uteri* should be the Latin, and ventral fixation of the uterus or ventral hysteropexy the English, designation of the operation in question.

**INDICATIONS FOR VAGINAL FIXATION, WITH  
ESPECIAL REFERENCE TO THE BEHAVIOR OF PREGNANCY AND LABOR  
AFTER THE OPERATION.<sup>1</sup>**

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To fix the indications of an operation of such comparatively recent date, and one in which the modifications have followed each other in rather rapid succession, is not altogether an easy task. When I first began doing vaginal fixation, two and a half years ago, I did not purposely enter the peritoneal cavity, and, in consequence, was unable to directly break up any existing adhesions. Twenty cases were operated upon after this method. Of these there were five cases of mobile retroversions without any appreciable disease of the adnexa, and fifteen cases with more or less adhesions and moderate disease of some of the appendages. In the first group, the clinical and anatomical results were perfect in four. In the fifth they were good until six months after-

ward, when the woman tampered with herself to bring on a miscarriage at the third month. In the second group the results were good in eight cases, and in seven the backward displacement recurred in from three to twelve weeks after the operation. Among these seven failures there were four cases of congenital retroversion with adhesions. As a result of this experience I had for my own guidance limited the indications of vaginal fixation to mobile retroversions and retroflexions without any marked disease of the adnexa.

About sixteen months ago I changed the method of operating so that the peritoneal cavity was purposely opened, any existing adhesions directly broken up, the whole uterus delivered through the vaginal incision, as were also the adnexa, which were subjected to surgical treatment on conservative principles. Twenty-nine cases were operated upon after this manner. The anatomical cures may be said to have been 100 per cent., as the only case of partial relapse obtained in one instance in which the method was not carried out in its entirety. The period of observation of these cases varied from three to sixteen months. As the cases constituting this series comprised every form of adherent backward displacement, with more or less disease of the adnexa, the indications for the operation had virtually no limitation where a conservative operation was at all applicable. There was one form, however, of malposition, in which the operation, to my mind, was contra-indicated. I have reference to congenital retroversion. It is doubtful, in my opinion, whether we have any operative procedure that will invariably be attended with good results in this condition. Just at the time when the believers in vaginal fixation were commencing to feel that the indications for the operation were firmly established on a broad basis, even broader than that of ventro-fixation, as will be made clear later, came the disquieting reports of several cases in which serious trouble was encountered at labor.

Inasmuch as the influence upon gestation and labor has a very strong bearing upon the indications for operative procedures of this nature, I shall devote the remainder of time at my disposal to a consideration of that question in vaginal fixation, first giving a concise abstract of the cases hitherto published in which labor was more or less seriously complicated.

CASE 1 (Strassmann).<sup>1</sup>—Intraperitoneal vaginal fixation; posterior colpo-perineorrhaphy; operator

<sup>1</sup> Read before the Section on Obstetrics and Gynecology, New York Academy of Medicine, Feb. 27, 1896.

<sup>1</sup> *Zeit. für Geb. und Gyn.*, Band XXXIII, pp. 510-514.



Dührssen; conception three months later; labor at full term; transverse position; difficult version; severe post-partum hemorrhage, arrested only by a compression abdominal bandage.

CASE 2 (Strassmann).<sup>1</sup>—Operated on Oct. 4, 1893; operator Dührssen; vaginal celiotomy for myoma, size of an apple, attached to anterior uterine wall; defect in uterus closed by interrupted silk sutures, ends of which carried through the vaginal flaps; some vaginal fixation sutures employed in addition; as a result there was, so to speak, a melting together of the uterine vaginal walls; conception September, 1894; acute gonorrhœa of vagina and cervix during the following winter; came to the Poliklinik on May 24, 1895. There was then prolapsus of the cord; head was in the pelvis, lying in the vaginal fixated part of the uterus; cervix high up on the right side above the promontory; with one finger carried into the os the shoulder was felt; nothing done for 24 hours; then had an eclamptic seizure, afterward a chill; temperature 100°, pulse 104; tetanus of the uterus; unsuccessful attempt at version under narcosis, and finally Porro's operation. Death occurred an hour later—and autopsy showed chronic nephritis, free blood in the peritoneal cavity, and a hematoma in the right broad ligament.

CASE 3 (M. Graefe).<sup>2</sup>—Operation May 6, 1894; vaginal fixation after Mackenrodt without opening the peritoneum; conception Nov. 30, 1894; colicky pains January, 1895. July 22, consulted in Graefe's absence Dr. Witthauer, who made out a transverse position, and observed edema of the feet. Again seen, Oct. 1st, uterus a hand's breath above the umbilicus, and very tense; transverse position of the child; cervix high up in the sacral cavity; attempts to change the position of the child ineffectual owing to the contractions of the uterus; shortly after had convulsions, amaurosis, urine contained a large percentage of albumin. Cæsarian section, good recovery.

CASE 4 (E. Wertheim).<sup>3</sup>—Operation by Schauta; method, Dührssen's. Five months after operation it is noted that the fundus is very closely and firmly adherent to the vaginal wall, "as if nailed to it." Labor at full term; cervix high up in the pelvis; transverse position of the child; under narcosis version after Braxton-Hicks method; delivery of a living child of eight pounds; good recovery. Some time afterward the fundus was still found lying against anterior vaginal wall, "as if nailed to it."

CASE 5 (W. Rühl).<sup>4</sup>—Method vaginal celiotomy, with longitudinal incision; very extensive adhesions, leaving a raw surface on anterior uterine wall; vaginal fixation, result excellent; had been sterile 7 years; nine months later pregnancy; bladder disturbances; labor at term; seen 48

hours after labor pains set in; cervix high up in the right side; head in a diverticulum of the anterior uterine wall fixed in the pelvis; under narcosis head pushed up and cervix brought down; os dilated to admit four fingers; cartilaginous-like ring encircling os; with difficulty dilated os to admit whole hand; could not turn child; membranes had ruptured some time before; perforated head and incision of the cartilaginous ring; child easily delivered; afebrile recovery. Later uterus was found in good position.

CASE 6 (W. Rühl).<sup>5</sup>—Vaginal fixation, with the fundus extensively sutured to the vaginal wall; pregnancy, bladder disturbances as in former case; labor at term; premature spontaneous rupture of the membranes; prolapse of cord; seen 24 hours after labor had set in; same local conditions as in former case; during examination, sudden cessation of the pulsations of the cord; incision in the anterior wall of cervix and body of uterus; child readily delivered with forceps; no hemorrhage worthy of mention; closure of uterine incision with catgut; afebrile recovery; uterus in good position several weeks later.

The same author reports three other cases of difficult labor at full term in which he did a version, saving the mother and the child.

#### CASES OF VAGINAL FIXATION IN WHICH PREGNANCY AND LABOR HAVE BEEN NORMAL.

W. Rühl<sup>6</sup>: Seven labors; method not stated.

E. Wertheim<sup>7</sup>: One labor; method probably Dührssen.

Strassmann (O. C.) reports 25 cases, several of which belong to Dührssen's series (estimate 10 cases).

Dührssen<sup>8</sup>: Seventeen cases; his own method.

Mackenrodt: Eight cases; his own method.

P. Wendeler<sup>9</sup>: Pregnancy at eight months; normal; method not stated.

Kossmann<sup>10</sup>: One normal labor; vaginal celiotomy.

C. Staude<sup>11</sup>: One labor; Dührssen's method.

H. N. Vineberg<sup>12</sup>: Two labors and one pregnancy at seven months; method: modified Mackenrodt; vaginal celiotomy.

We thus have fifty-eight cases of labor, including two cases of normal advanced pregnancy, in which interference was necessary in nine cases as follows:<sup>13</sup> One Porro, one Cæsarian section, two

<sup>1</sup> Ibid.

<sup>2</sup> *Centbl. für Gyn.*, 1896, No. 6.

<sup>3</sup> *Centbl. für Gyn.*, 1896, No. 2.

<sup>4</sup> Quoted by Strassmann, *Arch. für Gyn.*, Band I, Heft 3.

<sup>5</sup> *Berlin. klin. Woch.*, 1896, No. 1.

<sup>6</sup> *Centbl. f. Gyn.*, 1896, No. 7.

<sup>7</sup> *Monats. f. Geb. und Gyn.*, Feb., 1896.

<sup>8</sup> *N. Y. Med. Jour.*, March 7, 1896.

<sup>9</sup> Even with faulty technique the showing is better than that following ventral fixation, where interference was necessary 11 times in 53 cases (Nieländer, *Zeit. f. Geb. und Gyn.*, Bd. XXXIII, Heft 3).

<sup>10</sup> L. c.

<sup>11</sup> *Monats. für Geb. und Gyn.*, Band II, Heft 16.

<sup>12</sup> *Centbl. für Gyn.*, 1896, No. 2.

<sup>13</sup> *Centbl. für Gyn.*, 1896, No. 6.

cervical uterine incisions, and five versions. A further analysis shows that the difficulties obtained in cases operated upon after the Dührssen method, with a single exception—the case reported by Graefe. The report does not state the method of suturing nor the nature of suture material, both matters of vital importance in connection with the subject at issue.

When we investigate the nature of the difficulties we learn that they arose chiefly because the fundus was too firmly and extensively attached to the vaginal wall, necessitating the increase of the size of the uterus at the expense, principally, of the posterior uterine wall. This is just the contingency we might expect from Dührssen's method, in which a transverse incision is made in the anterior fornix at the vaginal junction, and the fundus attached by several sutures to the vaginal wall at this point.

Vaginal fixation, after the Dührssen method, therefore, has always been, in my opinion, faulty in technique, and has never been followed by me. My own experience, and that of others, have taught me that when certain points are observed in the technique of vaginal fixation no fears need be entertained of meeting with disturbances during gestation, nor with difficulties at labor. To be more precise: The superior fixation suture should be passed across the anterior wall of the uterus, one or two centimetres below the level of the insertion of the tubes, and through the vaginal walls one or two centimetres below the urethral meatus. Only two fixation sutures should be employed—the second a centimetre below the first. No scarification of the uterine wall should be made. The sutures should be tied on the vaginal wall, and removed at the end of three or four weeks. In my last two cases I carried out a technique which offers even less chance of any unfavorable influences upon gestation and parturition. After delivering the fundus, I passed a suture on either side, embracing the round ligament and a portion of the broad ligament adjacent to the uterus. These were carried through the vaginal flaps below the pubic arch at the side of the pelvis. In one of the cases, in addition, a suture was carried across the uterine wall in the usual manner, midway between the internal os and the fundus. The latter was employed to make more certain of the permanent result, though I think it may have been superfluous.

I have now arrived at a point at which, in a few sentences, I can formulate the indications for vaginal fixation as I understand and practice it.

It is indicated in all backward displacements of the uterus, with or without adhesions, and with or without diseases of the adnexa, in which surgical interference, for one reason or another, is demanded. It is particularly indicated when the backward displacement is complicated by moderate prolapsus of the uterus and prolapsus of the anterior vaginal wall. It finds an undisputed field in very fat subjects, with thick abdominal walls, in whom a ventral fixation constitutes a serious affair, and in whom an Alexander is extremely difficult of accomplishment. The same holds good in very thin subjects with thin and yielding abdominal parietes, so far, at least, as ventral fixation is concerned. The operation can be performed in nulliparæ, and even in virgins.<sup>1</sup> It is contra-indicated in certain cases of congenital retroversions. It should not be undertaken until a certain period has elapsed after the puerperal process, as the soft and friable condition of the uterus may lead to undesirable lacerations in the necessary manipulations to bring about anteversion of the organ.

#### NEGATIVE HISTOLOGICAL EXAMINATION OF THE BLOOD AS A FACTOR IN DIFFERENTIAL DIAGNOSIS.<sup>2</sup>

BY WALTER A. WELLS, M.D.,  
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THE very evident tendency of modern medicine to give greater prominence to those so-called clinical examination methods—physical, chemical, and microscopical—ought not, I think, to be construed as an effort to disregard, or even belittle, the value of close observation of the outward manifestations of disease, nor of the indispensable admission occasionally of anamnestic data.

We cannot fail to observe, however, that the latter functions are, with the progress of medicine, losing, in comparison with the former, their importance in the diagnostic art. To-day, instead of placing our chief reliance in history and symptoms, as did the earlier practitioners, we have relegated these to a somewhat subordinate position, and are inclined to pin our faith, rather, in the stethoscope, microscope, and chemical reagents.

These, it cannot be denied, are more precise, definite, and constant means, and are justified accordingly, from a scientific standpoint, in re-

<sup>1</sup> Among my cases there were four virgins and several nulliparæ, but they had been treated with pessaries and tampons for considerable lengths of time before being subjected to the operation.

<sup>2</sup> Read before the Clinical Society of the District of Columbia, January 13, 1896.

ceiving the high place which has been accorded them.

It is only very recently that methodical examinations of the blood have been made to serve the practical clinician; but there has been made in this short time such rapid and profitable advance, carrying with it such alluring promises of future possibilities, that there have appeared upon the field a succession of earnest and enthusiastic investigators, who have made and are continuously making valuable contributions in hematological studies. Would the medical practitioner but avail himself of those facts which stand confirmed by repeated observation, there would be certainly less excuse, if any at all, for ever confounding certain diseases which, without this aid, cannot be differentiated at times, even by the best diagnosticians; for example: pneumonia, in its commencement, from typhoid; typhoid from malaria; or even measles from scarlatina.

By the natural limitations of this paper, I am denied the consideration of the blood in various diseases, and even such instruments as the hemometer, hemaglobinometer, and hematocytometer. What information, then, is gathered by a mere examination of a specimen of blood under the lens? Beginning, as we should, with the fresh or native preparation, we may note the *rouleau* formation of the red blood-corpuscles, the fibrin formation in the plasma, the condition of the leucocytes, especially as to ameboid movement; the presence or absence of the plasmodium, better termed *hematobium malariae*.

In the colored specimen we direct our attention first to the red blood-corpuscles. Are they altered in: (a) size constituting the so-called poikilocythemia? If so, do the microcytes (or smallest sized), megalocytes (large sized), or gigantocytes (excessively large sized) prevail? (b) Is poikilocytosis,<sup>1</sup> or, as Ehrlich prefers to designate it, schistocytosis, present? and if so, to what degree? (c) Are the erythrocytes abnormal as to the amount of coloring-matter contained in their discoplasma? We observe the size of the central dell. An alteration in the coloring-matter is designated polychromemia; and some writers term chlorotic those corpuscles which are poor in hemoglobin. (d) Are there present the nucleated erythrocytes, forms which do not occur at all in normal blood? If present, it is of importance to note whether the normoblasts only are present,

<sup>1</sup> Whether poikilocytosis is, as Maragliano's experiments seem to prove, but a form of necrobiasis artificially produced outside of the body, or not, does not alter its significance from a clinical point of view.

We have, in this case, to regard the poikilocytosis as a measure of the corpuscle's vitality.

or whether the mesoblasts, or yet more important the gigantoblasts, are to be seen. The leucocytes may next claim our attention. (1) An increase in their number can be detected through microscopical examination. There should be, according to Neudorfer, one leucocyte in about every fifth field. The presence of 1 to 2 leucocytes in the field constitutes a mild leucocytosis, 3 to 5 a moderate, and 5 to 10 a considerable. (2) We should, moreover, examine in reference to the relative distribution of the leucocytes, the preponderance of one or the other of the various forms constituting, respectively, a polynuclear leucocytosis, a lymphocytosis, or an eosinophilia. (3) Examination as to the number of the blood-plaques or hematoblasts; (4) as to the presence of the perinuclear basophiles; (5) as to the karyokinesis or karymytoses (the mitoses of Müller); and lastly (6) we may seek for micro-organisms, though this usually requires special staining, and is only exceptionally required. The blood must present then a normal condition in respect to all these in order that we may say that the histological examination yields a negative result. There are some diseases in which this is essentially the case which may therefore, I think, be fittingly discussed under this heading.

In the commencement, let me state it must not be supposed that a negative, that is to say a histologically normal, specimen can mean only a normal condition of the blood. On the contrary, there may be present a not inconsiderable anemia, which, because it does not extend to alterations in the character nor the relations of the elements, is not discoverable upon microscopical examination. Such may be the case in the so-called quantitative anemia, where, as it were, there is a general impoverishment of the circulating medium, an anemia in bulk, a parallel deprivation of all the elements without any disturbance of their relation to one another. In such an anemia we have therefore a color index represented by 1. We can illustrate this better, perhaps, by stating concrete cases. Let us suppose before us two individuals, both evidently suffering from a serious, exhausting illness, grave pathological condition of the internal organs, both being weak, emaciated, cachectic, and very pale, and there may or may not be signs pointing to a definite localization of trouble in lungs, liver, spleen, or other organ.

We take a specimen of blood from the one case, fix and stain orderly with, say, eosin-hematoxylin, and what do we find? In addition to an augmentation in the number of leucocytes, there are alterations of a high degree in the elements.



There is poikilocytosis, poikilochromemia, megalocytosis and micro-cythemia, and we observe in the field also a number of nucleated erythrocytes. We now prepare a specimen in like manner from the other case and proceed to examine.

We see a different picture, and one that we may not have expected, in the case of an individual so manifestly anemic, with pale face and bloodless mucous membranes.

We can observe no signs of anemia in this blood upon microscopical examination, the leucocytes and erythrocytes are present in their normal relation to one another, and there are no departures from the normal as regards size, shape, or coloring. This patient is the subject of tuberculosis; the former has the blood characteristics of carcinoma.<sup>1</sup>

It is true that if we had used the Ehrlich tri-color stain we would in all probability have noted a deviation from the normal, because then it would be seen that the perinuclear basophiles of Neusser,<sup>2</sup> which are normally present, either failed or at least were lessened in number.

If we should proceed to the count of the corpuscles and to a measurement of the hemoglobin, the calculation of the color index<sup>3</sup> will result, as a rule, in 1 or thereabout, seldom less than .8.

It is surprising, as Grawitz<sup>4</sup> has shown, how little may be the reduction in the number of erythrocytes in tuberculosis, in spite of the apparent anemia. This he believed to be due to the peculiar effect of the absorption of tuberculous products, causing a condensation of the blood. His experiments upon animals demonstrated that injections into the veins of tubercular masses produced increased specific gravity of the blood, whereas the injection of extracts from cancer caused decrease of the red corpuscles and solid constituents of the blood.

The absence of the nucleated erythrocytes is one of the most important negative features of tuberculosis, especially as it is in this so distinctly opposed to cancer. It has been observed they are absent, or at least quite scarce, even after hemoptysis in tubercular subjects, although commonly a feature of anemia following hemorrhage. Tuberculosis is therefore, in its exemption from the erythroblasts, distinguished not only from cancer, but likewise from progressive pernicious

anemia, leukemia and anemia infantum, pseudo-leukemia, and the anemias of tertiary syphilis and phosphorus-poisoning.

A second important negative feature of tuberculosis is the absence of leucocytosis.<sup>1</sup> Limbeck was, upon the strength of this single fact, enabled in three cases to make the diagnosis of tubercular meningitis, in contradistinction from the primary suppurative form, in which leucocytosis, usually of an intense degree, manifests itself, and found his diagnosis substantiated by autopsy. These observations, confirmed later by von Jaksch,<sup>2</sup> cannot easily be overestimated, on account of the evident bearing upon prognosis.

An interesting negative feature of the blood in tuberculosis is the absence of an increase of the fibrin-net—interesting because tubercular disease of the lungs runs sometimes the course of a pneumonia. The latter affection is marked as well by a high degree of polynuclear leucocytosis as by its great increase of fibrin. It seems that the Koch bacillus, unlike the diplococcus, retards the formation of the fibrin, and that it is less, therefore, in those cases of croupous pneumonia developing in tubercular individuals.

There almost never occurs eosinophilia in tuberculosis,<sup>3</sup> and this fact may also be made use of in differentiating it from certain affections in which an increase of these elements is the rule, namely, Graves' disease, myelogenic chlorosis, intestinal parasites, leukemia, nephritis, chronic malaria, and primary essential emphysema and asthma.<sup>4</sup>

We have pictured in the foregoing only the uncomplicated disease. It may be profitable to recall here briefly some of the modifications in this typical case which can occur by reason of complicating conditions. We may see a chlorosis of red blood-corpuscles where there have been: (a) hemorrhage, (b) excessive diarrhea, in (c) conditions giving rise to a great loss of albuminates, and (d) in case of complication with chlorosis.

A polynuclear leucocytosis in the course of tuberculosis pulmonum should awaken a suspicion of extensive cavity formation. A lymphocytosis

<sup>1</sup> Rieder: "Beitrag zur Kenntniss der Leukocytose und verwandte Zustände des Blutes," Leipzig, 1892. Sadler: "Fortschritte der Medicin," Berlin, V, 10, 1892. Limbeck: "Schmidt's Jahrbücher," Leipzig, March 15, 1894. Peck: "Wiener medizinische Presse," 1891, June 29.

<sup>2</sup> R. von Jaksch: "Ueber Diagnose und Therapie der Erkrankungen des Blutes," Prag. med. Wochenschr., 1890, Nos. 31 and 33.

<sup>3</sup> N. B. Botkin and Bischoff have seen considerable increase of eosinophiles after injections of tuberculin.

<sup>4</sup> Some authors have failed to find an increase of eosinophiles in the blood in asthma, but Gabretschewsky ("Klinische Hematologische Notizen," Archiv f. experim. Pathol. und Pharmacol., 1890-'91, 28) reports three cases in which the per cent. was 9, 10, and 22 respectively. At any rate the sputum of asthmatics ("Gollasch zur Kenntniss des asthmatischen Sputum," Fortschritt d. Med., No. 10, 1889) will contain copious quantities of eosinophiles, which are always wanting or very scarce in tubercular sputum.

<sup>1</sup> It has been maintained by Bard that the blood may be independently the seat of cancer, and he has advanced the unique theory that leukemia is cancer of the blood.

<sup>2</sup> "Ueber einer besonderer Blutbefund bei urathischer Diathese," Wiener klinische Wochenschrift, 1894, VII, 727.

<sup>3</sup> The color index may be quickly estimated by dividing the number of red blood-corpuscles by 5,000,000, and then dividing the per cent. in hemoglobin by the result obtained.

<sup>4</sup> Centralblatt für Innere Medicin, No. 15, 334.

may exist as the expression of a quite general involvement of the glandular system. Very rarely one may have the type of a pernicious anemia. This could occur from the coexistence of sepsis, amylosis, nephritis, or carcinoma.

We pass next to the consideration of one of the essential fevers, the blood of which, though not in every respect normal under the microscope, yet at least presents negative features which mark it so clearly from others of its class as to entitle it to consideration under this head. I refer to typhoid fever, a disease in which all possible aids toward a diagnosis are to be welcomed, as the best clinicians confess themselves at times unable to make an early diagnosis. The most noteworthy negative feature of typhoid fever is the absence of a leucocytosis. Halla,<sup>1</sup> in 1883, made the general observation that febrile diseases were accompanied by the phenomena of leucocytosis. Limbeck,<sup>2</sup> at a later date, pointed out that leucocytosis occurred in only those inflammatory affections attended by exudation into the tissues, and mentioned typhoid as an affection exempt. This fact has been emphasized by Rieder,<sup>3</sup> Chetagraw, and Felsenthal,<sup>4</sup> and amply confirmed by clinical observation. Very often it is found, indeed, that the number of the leucocytes is under the normal; that, instead of a leucocytosis, there is a leukopenia. The decrease is at the expense of the polynuclear element, which may fall at the critical stage to 20 per cent., instead of their normal 64 per cent.; whereas the proportion of lymphocytes may rise to 50 per cent., instead of their normal 28 per cent. This relative lymphocytosis does not occur, however, until the second or third week. The diagnostic importance of a normal or, as the case may be, lessened number of leucocytes occurring in typhoid is seen when we know that but three other febrile affections present a similar condition of things, viz., measles, malaria, and tubercular meningitis.

We can easily exclude pneumonia, an affection marked by an intense leucocytosis. It also differs from pneumonia in showing no fibrin development. Malaria, even if search for the plasmodium should be negative, has positive signs in the usually found increase of pigment, hematoblasts, and eosinophiles. Endocarditis maligna, presenting at times a picture very difficult to distinguish

from typhoid fever, may be excluded if leucocytosis be absent; so also any form of sepsis.

If, finally, from other symptoms, an irrefutable diagnosis of typhoid is justified, we must conclude a complication exists, as nephritis, pneumonia, otitis, parotitis. A polynuclear leucocytosis in the later stages—fourth or fifth week—may find its explanation in extensive ulcerations in the intestine that do not heal.

Measles, as already stated, presents a blood-type not unlike typhoid.

In the tendency toward a low number of leucocytes, especially of the eosinophiles, which Felsenthal found never over 1 per cent. (lowest normal limit), mark it very strongly against scarlatina, in which Katschekoff<sup>1</sup> has found always leucocytosis, which at times reached 30,000, and in which eosinophiles varied from 8 per cent. to 15 per cent.

Other affections may be mentioned where the blood is essentially normal, as in primary syphilis, icterus neonatorum,<sup>2</sup> morbus maculosus Werlhofii, scorbutus (signs of regeneration in blood being usually wanting),<sup>3</sup> and benign growths; which facts may be of real use at times for diagnosis.

For instance, a dilatation of the gall-bladder or a hydronephrosis could in this be at least distinguished from echinococcus, because the latter is attended with eosinophilia.

In conclusion, I will mention an instance of negative examination of the blood leading directly to diagnosis, under circumstances somewhat unique. At a time when I was engaged in hematological studies at Neusser clinic, in Vienna—

A female patient, age 25, was admitted to the wards whose history was briefly as follows: As a child, had had rickets, measles, scarlet fever; menses began at 17 years, and have been since regular and normal.

At age of 13 suffered much from gastric troubles, for which she was under treatment in hospital seven months; vomited after eating, often a quantity of blood; had distaste for sour food.

Present attack began three weeks prior to admission, and is similar to the former. Vomiting comes on ten to fifteen minutes after eating, and several times the patient declared there had been copious admixture of blood. There was tachycardia; respiration 58.

A provisional diagnosis of *ulcus ventriculi* was made in this case, and I undertook an examination of the blood, expecting to find the alterations

<sup>1</sup> "Ueber den Hämoglobingehalt des Blutes und die quantitative Verhältnisse der roten und weissen Blutkörperchen bei acuten fieberhaften Krankheiten," *Zeitschrift für Heilkunde*, 1885, V, 4.

<sup>2</sup> Schmid's *Jahrbücher*, Leipzig, March 15, 1891.

<sup>3</sup> "Die pathologische Anatomie des Blutes bei Typhus abdominalis," Dissert., Petersburg, 1890.

<sup>4</sup> "Hematologische Mittheilungen," *Archiv f. Kinderkrankheiten*, Stuttgart, 1892-93, XV, 78.

<sup>1</sup> Katschekoff, "Die morphologische Blutveränderungen bei Scharlach," *Wratsch.*, No. 41.

<sup>2</sup> "Fischl zur histologie des kindlichen Blutes," *Zeitschrift für Heilkunde*, V, 13, p. 277.

<sup>3</sup> Neusser's *Lectures* are my authority for this and many other statements where no reference is given.

belonging to a post-hemorrhagic anemia; that is to say, in addition to slight leucocytosis, some nucleated red blood-corpuscles, a predominance upon the field of microcytes, and an increased number of the so-called hemoblasts, or blood-plates of Bizzozero;<sup>1</sup> but, to my astonishment, these changes were not to be seen, and the result of a thorough analysis was a normal condition of the blood.

The following day the case was demonstrated by Neusser in the lecture-room, and diagnosis was reached of hysteria, with hysterical vomiting, the vomiting of blood, which had not been seen by any one else, being discredited on the strength of a failure of post-hemorrhagic changes. Neusser laid chief stress upon the hematoblasts, which he holds to be important signs of regeneration in the blood, and whose presence in large numbers, therefore, he regards as favorable. He believes them to arise from the shed-off epithelium of the vessels; differing from Bizzozero, who thought they arose from the destruction of the white and red blood-corpuscles, and Löwitt, who supposed them to be the products of the destruction of the leucocytes or precipitates from the plasma, and therefore degenerative changes. According to Hayem, they are steps in the formation of erythrocytes. At any rate, their presence is not to be expected until a day or so after the loss of the blood.

The diagnosis in the case in question was corroborated by the discovery of the so-called hysterical stigmata. An interesting feature was the absence of hydrochloric acid from the stomach secretions.

If I have succeeded in demonstrating that blood analysis is more frequently demanded than was formerly supposed, and may be helpful to diagnosis at times, even though negative in its result, and have thereby added any incentive for greater attention to that department of investigation which certain observers believe offers a hopeful medium for the solution of many dark problems in physiology and pathology, then my object in presenting this paper has been accomplished.

UNDER the laws of the State of Louisiana the New Orleans Medical and Surgical Journal, Ltd., was incorporated last month. It is our sincere hope that this department will insure a long and successful career for our esteemed Southern exchange.

<sup>1</sup> Bizzozero and Salveoli, "Ricerche sperimentali sull' ematopoiesi Splenica," *Archivio scienze Mediche*, Vol. IV, No. 2.

## CLINICAL MEMORANDA.

### SOME OF THE USES OF STROPHANTHUS.

By W. K. WADLEIGH, M.D.,  
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STROPHANTHUS is by no means a new remedy—a memoir of its physiological action was presented to the French Academy of Sciences in 1865, thirty years ago. Dr. Fraser began to study it in 1869, but it was not until 1885 that he gave it a definite place in therapeutics as a heart tonic. The physiological action of strophanthus, generally speaking, may be said to be similar to that of digitalis, but there are some points of difference. Unlike digitalis, it has very little, if any, power to contract the small blood-vessels, in the ordinary medicinal dose. As a diuretic, it is much more sure and certain than digitalis, acting probably on the Malpighian tufts. The effect produced by strophanthus is almost immediate, though not so prolonged as that of digitalis, and it almost never produces any unpleasant stomach symptoms, no matter how long administered.

This is a point of practical value, as it not unfrequently happens that the administration of digitalis has to be suspended, or even stopped entirely, on account of the derangement of the stomach, which is sometimes produced even by the smallest doses. In large doses strophanthus acts not only on the heart muscle itself, but upon the entire muscular structures of the body. In poisonous doses it will cause nausea and vomiting, and acts as a depressant to the respiratory centres, and finally causes death, usually by asphyxia.

Clinically, strophanthus may be used with more or less benefit in all cases where digitalis is indicated, not that it will do as well in all cases, but if digitalis has failed, or has had to be discontinued for any reason, we have in strophanthus a valuable substitute; but it is more especially in a few conditions in which digitalis is not so generally applicable that strophanthus finds its chief usefulness:

1. Among aged people, generally speaking, I have found strophanthus to give much better results in almost every condition where this class of remedies is indicated. In old age we often find an atheromatous condition of the arteries; and although digitalis may not be positively contra-indicated, in all such cases it is very apt to do little good, and sometimes may even do harm.

2. In vertigo of aged people caused by cerebral anemia or by a lack of balance between the different parts of the circulation of the brain. This is something we find very little about in the books, and it is a condition in which I have been able to do much good with strophanthus.

3. In angina pectoris. My experience with strophanthus in this disease has led me to believe that it will benefit a larger number of cases than any single remedy we possess.

4. In general anemia and chlorosis when accompanied by weakness of the heart, as so often happens in these diseases, it not only gives great relief so far as the heart symptoms are concerned, but, by sending more blood to



the tissues, increases their nutrition in this way. It is often an advantage to combine it with nitroglycerin in anemia.

5. In the so-called irritable heart characterized by palpitation on slight exertion, more or less pain in the region of the heart, often quite severe, weak, quick pulse, sometimes intermitting, but with no organic disease of the heart present. In this condition we may give strophanthus with almost an absolute certainty of deriving benefit from its use. This class of cases is quite numerous, and I have yet to see the case which strophanthus will not benefit, and it will often cure them.

I have been using strophanthus now for about seven years, and during that time have given it in a good many cases, and in fact I consider it one of the most useful remedies we have. It is impossible to give a report of many cases, because I have not kept a record of them. I will, however, mention two or three cases which may be of interest:

CASE I. Mrs. C., 56 years old; history of organic heart disease for several years. On being called to her I found the following conditions present: Very marked mitral regurgitation, considerable dilatation, anasarca of the lower extremities to the knees, great dyspnea so that the patient was not able to lie down at all, more or less edema of the lungs, with incessant coughing. Prescribed digitalis, ten drops every two hours, .1 grain of calomel every hour, with stimulants. Two days of this treatment produced very little or no results whatever. Convallaria was next tried, with no better result. Nitroglycerin gave some temporary relief, but nothing permanent was really accomplished until strophanthus was used, the good effect of which was apparent almost immediately. In twenty-four hours she was able to resume the horizontal position, and the improvement was continuous from this time on, the anasarca mostly disappeared, excepting some slight swelling about the feet and ankles, and she was able to get about the house and attend to her household duties. At this time the remedy was discontinued and she soon returned to the same condition in which I first found her.

Strophanthus was again administered, with equally good result. She went through this same process three times and she then passed from under my care, and her next attack proved fatal. This was the first case in which I used strophanthus. The largest dose administered was twelve drops, and I have never found it necessary to exceed this amount in my subsequent cases. I do not know why digitalis did not succeed, or why so much greater benefit should be derived from strophanthus, as the conditions present would seem to point to digitalis as the remedy.

CASE II. Mr. K., aged 86. History of temporary insanity some thirty years before. Found him in a generally enfeebled condition, and troubled with vertigo so that he was unable to walk without assistance; when he attempted to do so he would almost invariably fall. Began to give strophanthus and in two weeks he was able to walk without assistance.

This was supplemented by other treatment as occasion required. I made several attempts to discontinue the

strophanthus, but each time I did so I found him returning to his former condition. He took the remedy almost continuously for five years, until the time of his death. This case is of interest for two reasons: First, it illustrates the benefit which may be derived from the use of strophanthus in cerebral vertigo of old people, of which I have already spoken, and it also shows that it may be given for a long period without any unpleasant symptoms arising from its use. So far as I know, this is the only case which has been reported where strophanthus has been given continuously for so long a time.

CASE III. Angina pectoris. Male, 46 years of age. Had been suffering from the disease about two years when he first came under my care. Treatment five drops of tincture of strophanthus with two drops Fowler's Solution three times a day. His attacks soon became less frequent and severe, and improvement continued as long as he used the remedy. He had been obliged to take one-half grain of morphine two or three times a week for the relief of the paroxysms, but was soon able to discontinue this. In this case nitroglycerin seemed to augment rather than relieve the severity of the paroxysms. He died of this disease last winter, some time after he had passed from under my observation. This is only one of several cases of angina where I have given strophanthus, and it has always given more or less relief with the exception of one case. This patient could not take it, for some reason, and it had to be given up.

The best preparation of strophanthus is the tincture prepared from the seeds. The dose given is one to ten minims; it is rarely necessary to give it in larger doses than five drops, three or four times a day.

#### TOXIC SYMPTOMS PRODUCED BY PIPERAZINE.

By CHARLES H. P. SLAUGHTER, M.D.,  
OF PHILADELPHIA.

THE compound whose toxic symptoms are about to be described is a comparatively recent one, being introduced by Merck as an antipodagric and antirheumatic. Very little is known, as far as the writer can ascertain, in regard to its physiological, toxic, or therapeutic action. Chemically, it is a diethyl-diamine ( $C_4H_{10}N_2$ ).

The following case has come under my observation: Maud E., married, of English birth, 32 years of age and a sufferer from uric-acid diathesis, applied to me for treatment on December 10, 1895. I placed her on the ordinary remedies for such complaints, but with negative results. On December 16, 1895, I was summoned to her home, and found her complaining of quite marked vesical irritability and tenesmus, being now confined to her bed. Upon examining the urine I found it rich with uric acid. To overcome the marked acidity of the renal secretion, and, at the same time, cherishing hope that the diathesis would be favorably influenced, I ordered her the following prescription, viz.:

R Piperazine . . . . . 3i

Fiat chart. No. iii.

directing one of these powders to be dissolved in a pint

of water, the whole to be consumed during the following 24 hours. This was about noon.

Mr. E., the husband, took the prescription to the drug-store and had it compounded. Forgetting just how the potion was to be administered he inquired of the drug clerk, who directed him, with the customary wisdom, to dissolve a powder in a *teaspoonful of water* and give at once. When the husband arrived home he relieved himself of the directions which the druggist had given, but the wife remembered my statement that a pint of water was to be used to dissolve the powder. This she did, and drank the entire pint, containing 20 grains of piperazine. When the proprietor of the store returned the clerk informed him how he had directed the man to give the medicine. Realizing that this was a rather potent dose, the proprietor hastened to the patient's house, only to find that the entire 20 grains had been taken. He called on me at about 5 o'clock, relating the above circumstances and stated that the patient's pulse was good.

I saw the woman at 7:30 P.M. She was greatly cyanosed and semi-comatose, it being necessary to arouse her to obtain any reply to inquiries. Her pupils were minutely contracted, the pulse 50 beats per minute and slow, temperature 97.4° F. The respirations were very much depressed and a low muttering delirium prevailed. The tips of the fingers and lips were cyanotic, and on attempting to walk complete loss of motion was observed in both lower limbs, while sensation was well preserved. The symptoms were indeed most alarming.

Appreciating the gravity of the situation which confronted me, I administered cardiac and respiratory stimulants, using at the same time external heat and elevating the lower limbs. The woman also received a high stimulating rectal injection and was catheterized. It was only after several hours of the above treatment, persistently administered, that reaction occurred.

The next day I visited her and found the loss of motion returning and also a marked hypostatic congestion of both lungs. Upon the sixth day the paraplegia had vanished and the woman finally made a complete recovery. The paralysis was treated with large doses of strychnine and massage.

## MEDICAL PROGRESS.

**Experimental Addison's Disease.**—At a recent meeting of the Société de Biologie, BOINET (*Semaine médicale*, 1896, No. 8, p. 62) related the results of a series of experiments directed to the artificial production in animals of Addison's disease. It was found that lesions of the suprarenal capsules were followed by an accumulation of black pigment in the blood and an infiltration therewith of a large number of organs and tissues. From 109 rats both suprarenal glands were removed; the glands of 20 were ligated, and in a third series the glands were cauterized by means of tincture of iodine, silver nitrate, ferric chloride or zinc chloride, or irritated with pus from inflammatory or tuberculous lesions. The black pigment, which was like that found beneath the skin and the mucous membrane and in several organs from two fatal cases of

Addison's disease, was found in the blood in notable quantity in half of the cases, in smaller quantity in a quarter, and not at all in the remainder. In a number of animals whose suprarenal capsules had been irritated or removed several months previously, there was also an infiltration of the pigment in the subcutaneous cellular tissues, in the lumbar and mesenteric glands, in the peritoneum, in the mesentery, under the fibrous capsule, and in a cyst of the kidney, in a cyst of the liver, in the superficial portions of the spleen, in the lung, in the prevertebral cellular tissue, at the surface of the brain, in the bony marrow, and in the muscles. Sometimes marked muscular paresis, with gradual asthenia, completed the analogy with Addison's disease. Finally, injection of an extract prepared from the muscles of such rats induced fatally toxic results in other rats, especially if the suprarenal glands were previously irritated or removed.

**Hernia of the Vermiform Appendix.**—SENDER (*Münchener medicinische Wochenschrift*, 1896, No. 5, p. 96) has reported the case of a male infant, 5 weeks old, presenting a telangiectasis of the right thigh, a small umbilical hernia, and a slight hypospadias, who, after mild signs of illness for a day or more, was seized with vomiting of greenish matter, while the bowels were constipated and even flatus was not expelled. The condition soon became alarming, pallor and other signs of collapse manifesting themselves, and relief not following hot baths and high rectal injections. It was now observed that a slight swelling had formed in the right groin and right side of the scrotum. The umbilical hernia was readily restored, but the swelling in the right groin was tense and elastic and could not be dissipated. Incarcerated inguinal hernia was diagnosed, and after a prolonged hot bath and attempted reposition under ether, without success, an incision was made over the swelling in the groin and the hernial sac exposed. In the sac was found the vermiform appendix, which was about two inches long, reddish-brown in color, and swollen and flexed in the middle, and situated like a bar before the inguinal opening. The appendix, which was provided with a well-defined mesentery, presented a furrow resulting from the strangulation, but the cecum appeared healthy. The appendix was ligated at its base and removed, and the stump covered with serous membrane and inverted into the cecum. The inguinal ring was divided, the cecum returned to the abdomen, the hernial sac largely extirpated, and the canal finally closed by suture. The further progress of the case was free from complication, and the child was dismissed at the end of a week with a gain in weight and all its functions well performed.

**Tabes Dorsalis as a Disease of the Neuron.**—MOXTER (*Zeitschrift für klinische Medizin*, B. XXIX, H. 3, 4, p. 334) reports an interesting case of tabes dorsalis under observation at the clinic of Prof. Leyden, Berlin, in support of the hypothesis that the disease is primarily an affection of the neuron. The patient was a woman, 57 years old, in whom double optic atrophy developed in the course of four months, leading to almost total blindness. In addition there were lancinating pains in the lower ex-

tremities, girdle-sense, and radiating pains paroxysmally in the face and head. Death resulted in consequence of disease of the heart. Post-mortem examination disclosed evidences probably of tertiary syphilis (atrophy of the glands at the base of the tongue, in conjunction with arterio-sclerosis). Upon microscopic examination, numerous atrophic fibres were found in the peripheral nerves. The arachnoid throughout the cord presented evidences of chronic inflammation. The lowest roots of the posterior nerves in the cauda equina were the seat of only slight changes. In the posterior columns of the sacral and lumbar portions of the cord were ill-defined areas containing a relative deficiency of fibres. The posterior roots from the 5th dorsal to the 8th cervical contained atrophic fibres arranged in bundles and whose medullary sheaths failed to take appropriate stains. In the same region the intramedullary fibres were greatly rarefied. In the posterior columns from the 5th dorsal segment upward were two well-defined areas, showing an increase in glia and an absence of fibres, but no loss of fibres could be demonstrated above the nuclei of the posterior columns. The gray matter of the lumbar and sacral cord contained an area of destruction and disappearance of ganglion-cells, with increase in the glia and disappearance of the medullated nerve-fibres. Above this, destructive changes had taken place in the anterior horns of the gray matter. In the retina the cells of the ganglion-cell layer were greatly rarefied, and the nerve-fibre layer was altogether wanting. Some fibres remained in the papilla and in the optic nerve. A similar loss of fibres was present in the chiasm, while the cells of the pulvinar and of the geniculate body were unaffected.

**Lead Gout and the Influence of Lead Intoxication upon Uric-acid Excretion.**—As the result of a careful clinical study and a survey of the literature of the subject, LUETHJE (*Zeitschrift für klinische Medizin*, B. XXIX, H. 3, 4, p. 266) maintains that there can be no doubt that an intimate relation exists between lead intoxication and gout. It is probable that by itself, without the aid of other etiologic influences, lead is capable of causing gout. Intoxication with lead has no influence upon the excretion of uric acid; so that the gout-inducing activity of lead is not due to retention and accumulation of uric acid. The presence of uric acid in the blood of those suffering with lead intoxication is to be attributed to an excessive production of this acid. How this is brought about cannot at present be explained. In all probability lead is capable of inducing "gouty necrosis." In order to cause gout the intoxication with lead must have been of long standing. The clinical course of lead gout differs in several particulars from that of the ordinary form of gout: (a) The first attack usually occurs at a relatively early period in life. (b) There is a tendency for many joints to be involved in rapid succession. (c) Often joints are involved that usually escape in the ordinary form. (d) The tendency to the formation of tophi and of deformities is more than ordinarily pronounced. The prognosis is always dubious. Examination of the urine of a dog poisoned with lead showed that xanthin bodies comprised about

half of the nitrogen of the alloxur bodies. After feeding with thymus gland, xanthin bases could be found in the blood, but no uric acid.

## THERAPEUTIC NOTES.

**The Treatment of Urinary Lithiasis.**—In the attack of renal colic the patient should be placed in a warm bath and there kept for an hour. Of the following solution 15 minims should be injected hypodermically at once, and thereafter 8 minims every hour until the pain subsides:

Take of:

Morphine hydrochlorate 2½ grain  
Boiling water . . . 1½ fluid drams.—Mix.

Besides, a pill containing 1-6 gr. each of powdered opium and powdered belladonna should be taken twice daily. In the intervals between the paroxysms the patient should abstain from dark and smoked meats, from game, sorrel, asparagus, peas, tomatoes, and spinach. He should avoid also all alcoholic and aerated beverages, as well as tea and coffee. He may eat white meats, well cooked, eggs, light fish, farina, and fruits, fresh or stewed. He may drink white wine half diluted. He should take daily exercise in the open air, but should avoid excesses of all kinds. Every morning the surface of the body should be rubbed with flannel gloves. A simple bath may be taken every third day. Before each meal 15 grains of lithium benzoate may be administered well diluted. Any pure water or litha-water may be taken freely. — *Tribune médicale; Progrès médical*, 1896, No. 2.

**Urea as a Diuretic.**—Governed by a knowledge of the solvent action of urea upon uric acid, KLEMPERER (*Berlin. klinische Wochenschrift*, 1896, No. 1, p. 6) was led to employ the first-named agent, medicinally, in the treatment of a number of cases of uric-acid renal calculi. The results were entirely satisfactory. It was noticed besides that conspicuous diuresis resulted also. For this reason it was concluded to employ urea as a diuretic, and in two cases of cirrhosis of the liver attended with ascites it was thus used and caused the disappearance of the peritoneal effusion. The agent was given dissolved in distilled water in the proportions of from 1 to 20:200 (from gr. xv to 3 v to about f 3 vij) to be taken daily in tablespoonful doses at intervals of an hour. The taste of the drug is not agreeable, but is readily removed by drinking milk after the ingestion. No ulterior influence was exerted upon the appetite or digestion of those using the agent. For its action as a diuretic, a healthy state of the renal parenchyma is necessary.

**For Uterine Leucorrhœa.**—

B Acid Tannic. . . . 3 ij  
Alcohol. pur. . . .  
Creosoti . . . aa f 3 ss.  
Aque destil. . . . f 3 viij.—M.

S. Add a tablespoonful to a quart of warm water, and use three or four times a day as a vaginal injection.

—LIROLA, *Progrès médical*, No. 6.



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SATURDAY, MARCH 14, 1896.

## IS NEW YORK TO HAVE ITS MOLOKAI?

If it be true that misery likes company there must have been rejoicing when the doors of the North Brothers Leprosery were thrown open to admit the latest victim of this uninviting disease. The lot of the four patients who have been confined in this temporary lazaretto during the past few months must have been happiness itself compared with the fate of Ding, the Chinaman who died a year or so ago, forsaken and forlorn, the sole inmate of a rude hut erected on the extremity of the island. Here, without the consolation of a word spoken in a tongue he could understand, longing and hoping day by day that he might be sent back to the Flowery Kingdom, and suffering more from nostalgia than from his actual disease, he finally refused to partake of the food passed in at the door of his living tomb, and perished miserably.

Well might the writer of his obituary in a German paper at the time, call him "*Armes Ding*," for he had been poor indeed. Another Chinaman is there now—Long Dong. Their very names ring out their knell! He, however, has companions: Bryan and Peters, who are negroes; Dalco,

an Italian; and now a native of the United States, who has lived in this city for seventeen years, has joined the outcast band.

This man is a cook, and it would seem either that this occupation predisposes to leprosy, or that lepers are especially apt to seek a livelihood by catering to the wants of the inner man. It will be recalled that the leper who created so much discussion, and a certain amount of leprophobia in Philadelphia several years ago, was a hotel cook in that city. A few years previous to this an American woman who had resided among lepers in South America, was discovered with marked manifestations of the disease, while acting as cook in a Philadelphia restaurant. Several of those who have from time to time been inmates of the New York City Hospital have given the culinary art as their occupation. Within a few months a domestic in a private family in Boston was found to be leprosy, but whether or not she did the cooking has escaped us. Evans, who died during the past year in the City Hospital, and who was for a long time under the writer's care, came to this country from Bermuda at the age of 12 years, and was here for two years before signs of the disease showed themselves. He then returned to Bermuda, and subsequently took a trip on a vessel as cook, or cook's helper.

"Vic," who was also at one time a patient of the writer's, was a noted cook, and a particular stew which he manufactured at the Colored Home was held in high esteem by the hospital inmates, when they were fortunate enough to be in his good graces. "Vic" and his stew are, however, things of the long since past, and we must return to things present and to come.

Does the American leper have a fair show?

In a New York newspaper of recent date appeared the following dispatch from Minneapolis:

"A case of Asiatic leprosy has been discovered in the western part of Grand Forks County, North Dakota. The victim is Jens Olsen, a Swedish boy, 17 years old and an orphan. The county commissioners have had a small cabin built for him on a farm, and he will be kept there alone."

Is this really the threshold of the twentieth century on which we stand? Are we living in a Christian land? Can we call ourselves civilized?

Is it not enough to be an orphan and a leper without being condemned to an eternity "alone"?

Even if the report of such an outrage is not true, it has gone out to the world as the American modern method of caring for these unfortunate creatures, and we have seen the same methods applied at our very doors. At the third meeting of the Congress of American Physicians and Surgeons in Washington, the question of national control of leprosy was fully discussed, and the following motion was adopted and directed to be transmitted to the proper Committees of the Senate and House of Representatives:

"WHEREAS, The American Dermatological Association recognizes the importance of the undoubted existence of leprosy in North America; therefore

"Resolved, That the Congress of American Physicians and Surgeons be requested to memorialize the Congress of the United States of America, with a view to the appointment of a commission of five to investigate the prevalence of leprosy in the United States of America, and in countries upon its border; and to suggest means for the control of the disease."

No action seems to have been taken upon this very reasonable request. In the mean time the leper population has begun to cause trouble under inadequate city and State control.

In Louisiana, where the necessity for action has become imperative, a hospital has been established on the Mississippi, made up of eight cottages surrounding a fine old plantation house; but in spite of the "Arcadian scenery" and other attractions of the place which offers accommodations for one hundred inmates, few can be induced, without the use of force, to avail themselves of it. From recent reports the disease would appear to be increasing at the expense of the native-born population in and about New Orleans, and it would seem to be as much a matter of national as of State interest to check its spread.

As far back as 1888 Dr. Blanc reported 42 cases of leprosy, 29 of which were in natives of Louisiana, and 22 of the city of New Orleans.

As to the existence of leprosy in countries upon our borders it is to be found in Canada, British Columbia, Mexico, Cuba, and the West Indies in general. In Havana a leper-house was established as early as 1681, but the disease had begun to diminish until a decided Chinese immigration set in. Now it is difficult to say how many lepers are on the island, but the hospital itself usually shows a census of little less than one hundred.

In Jamaica the leper population has been estimated at 450, or 1 to each 1380 of the residents of the island. To be sure, our little band makes a poor showing alongside of these figures; but if a suitably attractive resort were established, we could in time keep it respectably filled. Brooklyn would send from three to five good cases at once, Harlem could contribute, and the eligible stray subjects about town might be glad to avail themselves of the hygiene and science to be found in an up-to-date New York Molokai.

#### DEGENERACY AMONG THE DOCTORS.

THE recently enunciated theory of degeneracy is applicable to doctors of medicine, and the condition is mild or pronounced according to one's mental point of observation. One of its characteristics, which is most frequently manifested, is vanity; not the bombast and quackery of charlatans and mountebanks; not the stiffness and excessive decorum veneering over an insignificant stock of knowledge which were so transparently evident to Molière, who covered with ridicule the physicians of his day, and made these types conspicuous for all time. No, the average doctor of the present day knows more and has more common-sense than was the case with either of the types in question; besides there are few communities so deficient in perception that they would long tolerate either of them.

The doctor of to-day shows his vanity by attaching to his name on every possible occasion all the titles and distinctions that have ever been conferred upon him. He announces with his signature that he is the present incumbent of several offices, and the late or *sometime* incumbent of several more.

Ethical scruples do not prevent the doctor, who is thus degenerate, from heralding in the medical journals (and sometimes in the daily press, but this is *entre nous*) the account of some wonderful operation or some revolutionizing method of treatment, *provided* the patient gets well; otherwise the discovery dies with the patient.

Another evidence of degeneracy among doctors consists in the wild delusions that prevail concerning the exercise of charity. We do not

mean to imply that there are not many doctors who are truly charitable, benevolent, beneficent. There are many who are thus charitable to a marked degree. But there is a difference between that charity which does not let "the left hand know what the right hand doeth" and that which is announced with trumpets. How many doctors, even though they may occasionally pay for the board and nursing of interesting subjects out of their own funds, would do so if the personal, individual, selfish element, the hope of glory or gain, either directly or indirectly, were entirely eliminated? Strip off the mask, call it love of science, or, more honestly, the desire for personal advancement, which is proper enough in its place, but do not misname it charity and seek contributions from the public treasury under that misnomer. The earlier the public learns to differentiate between the true and the spurious medical charity the better for all concerned; the public will become more discriminating and the doctors more honest.

The acme of degeneracy is reached by those doctors who seek to impress the community, lay as well as professional, by the publication of statistics of methods or operations or cures. If fatal cases are mentioned at all they are usually explained away by any means other than lack of judgment, of skill, of foresight, or of proper care. Such publications confirm the appropriateness of the late Lord Beaconsfield's remark that lies were of three varieties,—“lies, d—d lies, and statistics.”

They invade the realm of fiction and poetry, borrowing from the *imagination illimitable*, or as an alternative, they are the product of a bad memory. One whom we have always regarded as honest recently boasted of the performance of X major operations without a fatal result. We were tempted to exclaim, *et tu Brute?* Another eminent and respected friend stated that his records had been lost, but that he thought he had opened the abdomen at least a thousand times,—an incredible number to those who are familiar with his practice. A young surgeon of this city is said to have stated to one upon whom he operated for appendicitis that he had seen two thousand cases of this disease.

Some doctors are so accustomed to exaggera-

tion when speaking of their work that they seem to believe their own statements, and apparently seek to convince their hearers of their truthfulness. They evidently misinterpret the smile of incredulity when they reduce their statements to figures.

Statistical statements not only admit of exaggeration, but of a mysterious process of exclusion when it becomes necessary to refer to cases which have resulted fatally. Everybody knows that certain cases are doomed, whether they are operated upon or not; that with others there is a bare chance of success if an operation is performed. Suppose the operation is performed and the patient dies. The inducement may have been a large fee, or the desire and hope of relieving distress and saving life, or both. Everybody knows that either motive may sway one, and sometimes either may pervert the judgment. But the history of such cases, which is profitable alike for instruction or warning, seldom becomes known.

A further evidence of degeneracy is seen in the misleading and untruthful character of certain statements which are published in the daily papers, and which are inspired, of course, by medical authority. We do not forget that due allowance must be made for inaccuracies on the part of reporters. For example, in the *New York Times* for February 20, 1896, was an article which stated that the operation of appendicitis had a mortality of 2 per cent. We doubt whether such success is possible to even the most brilliant and most skilful surgeons, for they are the very ones who are called upon to see and treat the most desperate cases. It would be interesting to know how those cases are classified, not inconsiderable in number, in which the diagnosis is erroneous, no disease of the appendix being found when the abdomen has been opened. These evils, blights upon character, faults of morals as well as of intellect, which have been referred to, certainly without unkind feelings toward those who have manifested them, are often the product—one of the by-products, shall we say?—of success. The unsuccessful man is seldom a boaster, and has no statistics to inflict upon his hearers whenever he rises to debate a question. Medical degeneracy is therefore allied to success, at least in many instances; but it is admitted that the condition



does not vary greatly from that which often attends success in other walks of life where riches beget arrogance, luxury, and even untruthfulness. Its cure is not diminished professional assiduity, not diminished striving for ideal limits to the grand work which Medicine proposes to her votaries, but greater self-control, greater modesty of statement, and greater zeal for the absolutely and accurately truthful.

## DERMATOLOGY.

### A CRITICAL RESUME OF RECENT PROGRESS.

WHAT part diet plays in the etiology and treatment of diseases of the skin is still undetermined. The difficulties involved in a proper study of the subject are very great, as idiosyncrasy enacts so large a part in the effect of any diet. "One man's meat is another man's poison" is a familiar and true saying. While there are a few diseases of the skin that are due to diet without a doubt, such as pellagra and urticaria, in most dermatoses no such connection is proved. In the last meeting of the British Medical Society diet as a factor in skin diseases was discussed in the Section on Dermatology. Dr. W. G. Smith, in his paper (*British Jour. Derm.*, 1895, VII, 309), took what seems to me the true view in regard to diet; and that is, that, although there are only a few foods which have an undoubted tendency to cause skin diseases, still an improper or insufficient diet is an etiological factor in many dermatoses, as it induces a condition of malnutrition that renders the patient susceptible to all sorts of accidents, skin diseases being among them. It is therefore eminently proper to improve the nutrition of a patient with a skin disease, by improving and regulating his diet, as well as by other means. The conclusion of Dr. Smith's paper is very commendable. He says: "Moderation and temperance in all things are the only rules for diet. The avoidance of alcohol, the regulation of the bowels, and the cure of anemia are more important than any special diet."

Bacteriological science is constantly shedding new light upon the etiology of skin diseases. One of the latest diseases shown to be parasitic

is trichorrhexis nodosa. We knew very little as to the cause of this peculiar malady. It was thought by some to be due to handling the beard, by others to be a neurosis. In 1894 Hodara found a bacillus in constant relation to the disease as it occurred in the scalp hair of women in Constantinople. Now Essen (*Archiv f. Derm. u. Syph.*, 1895, XXXIII, 415) has succeeded in making pure cultures of a bacillus from a case affecting the beard, and in reproducing the disease from the cultures. The bacillus of Essen was never found on sound hairs, and it was not the same as the one found by Hodara. Unfortunately for the absolute success of Essen's investigations, he was unable to find the bacillus on the diseased hairs of the subject of the inoculation experiment. It is evident that the disease is parasitic and that the subject merits further study.

Up to a year ago it was not known that mycetoma, or the fungus-foot of India, existed in this country. It then so happened that two cases were reported in one year, one by Dr. Adami, of Montreal, to the Association of American Physicians, and the other by Dr. J. Nevins Hyde, of Chicago, to the American Dermatological Association. The disease in both cases originated in this country. Dr. Hyde's patient (*Jour. Cutan. and Gen.-Urin. Dis.*, 1896, XIV, 1) acquired it in the usual way; that is, by wading in rivers. It is a disease of slow but steady course, consisting in the appearance upon the foot of a large number of tubercles or fungoid nodules with fistulous canals leading under them down to a soft mass of tissue. The foot becomes swollen out of shape and useless. A puriform exudate, or one that resembles fish-roe, can be pressed from the tumors. It is an infective disease, due to an invasion of the tissues by the ray fungus. An excellent description of the microscopical appearances in the disease will be found in Dr. Hyde's paper.

At the last meeting of the American Dermatological Association one of the members proposed to give the name of "Pyoderma circumscripta superficialis idiopathica et traumatica" to what we have always called an "infected scratch." Our nomenclature is already overburdened, and there does not seem to be any need of a new name for so simple and self-evident a trouble as an infected scratch. There is small chance of the long and

unwieldy term ever being used, the name usually applied to the condition being all-sufficient.

In this connection the discussion over the terms leucoderma and vitiligo in a recent meeting of the New York Dermatological Society should be mentioned. Most writers on dermatology of recent times use the two terms indifferently; but at the meeting just referred to, Dr. Bronson, supported by Dr. Lustgarten, maintained that there was a distinction to be made between them; vitiligo being a definite disease, while leucoderma was only a condition that might be present in other dermatoses as well as in vitiligo. It seems better to drop either one or the other of these names, and to use the name achromia to designate the loss of pigment met with in so many diseases.

GEORGE THOMAS JACKSON, M.D.

## ECHOES AND NEWS.

THE *Medical Record* announces that the word *skiagraphs* [which, it will be remembered, was suggested by Dr. Catell in the *MEDICAL NEWS* of February 15th] is the best name that has been suggested for the Röntgen or X-ray pictures.

DR. NATHAN O. HARRIS, one of the most prominent physicians in Atlanta, Ga., died on March 6 from the result of an operation for appendicitis.

THE Commissioners of Charity of New York city have asked the Legislature for an appropriation of \$1,200,000 to be used in building a new morgue at the foot of East Twenty-sixth street, the erection of a Reception Hospital at Fordham, and the remodelling of the Almshouse buildings on Blackwell's Island.

THE regular medical profession of Baltimore, Md., is somewhat indignant over the appointment of two homeopathic physicians to positions in the city medical service. The inmates of the jails will have to submit themselves to this practice or none.

THE daily press brings reports of great cruelty to the inmates of Cuban hospitals by the Spanish troops. One hospital in Havana was first looted and then completely destroyed by them.

It is officially announced by the Medical Department of the University of Buffalo that its medical course, beginning with the session of 1896-7, will be extended to four years.

THE directors of the New York Post-graduate Medical School and Hospital have named one of their wards in memory of the late Dr. Charles Carroll Lee, who was for many years a professor in the institution. They have placed a tablet in the ward, giving the names of those

who combined to contribute the \$10,000 which were given for the purpose of the memorial. The faculty of the institution participated largely in the memorial gift.

FRENCH scientists, who have been carrying on a series of experiments in regard to the vitality of microbes in books and on general printed matter, report that germs of various kinds were cultivated from the printed matter of books, and that the corners of pages where touched by the fingers yielded the most prolific results. It was shown that disease-bearing germs, such as those of diphtheria and erysipelas, retained their vitality and were capable of causing the dissemination of the diseases.

DR. W. M. L. COPLIN, professor of pathology at Vanderbilt University, Nashville, Tenn., has been elected to the chair of pathology and bacteriology in the Jefferson Medical College of Philadelphia, where until last year he occupied the position of adjunct professor of hygiene and demonstrator of pathology. The new pathological laboratory of the Jefferson will be completed by the opening of the next term, when Dr. Coplin will assume charge of this department.

THE Craig Colony for Epileptics at Sonyea, N. Y., is about to be opened. The managers state that "an idea is gaining ground, not only in this, but in other States, that the State of New York is providing a large institution for the care of epileptics generally, and that all necessitous and dependent epileptics will be received and cared for. This is a grave error and should be early and earnestly discountenanced. Another growing misunderstanding is in regard to the reception of private patients in this institution. This is a feature entirely secondary in character, and is only to be entertained after all the dependent epileptics of the State have been provided for."

AT a recent meeting of the New York State Board of Charities the secretary was instructed forthwith to notify in writing the individual managers of all institutions subject to the supervision of the Board, and having the care or custody of children, that corporal punishment upon such children is an abuse and an evil and must henceforth be abandoned.

THE first number of the *State Hospitals Bulletin* is issued. It is to be a quarterly of 144 pages devoted to reports of clinical and pathological data in the several departments of the New York State hospitals for the insane, and under the management of the Lunacy Commission and the superintendents of the State hospitals. It is printed at the Utica State Hospital Print, and is published by the State. This number makes a very creditable appearance in every respect, but it remains to be seen how long the State will sustain any additional burdens in the care of its 20,000 insane other than what may be necessary for their mere subsistence.

THE *Medical Record* announces that it completed its thirtieth year on Saturday, March 1st, the first number having been issued March 1, 1866. From the more extended experience of fifty-two years, the *MEDICAL*

NEWS extends its congratulations and encouragement to its still youthful but lusty contemporary.

AN effort has been made by a committee of the New York County Medical Society and the New York County Medical Association to set aside the new appointments of visiting staffs to the various New York city hospitals under the reorganization by the Commissioners of Charities. The method of attack was to insist that these appointments came under the Civil-service law—requiring a competitive examination; and the matter was taken before a judge of the Superior Court. Judge Andrews has handed down his decision that the legislative act regulating the Civil Service did not intend that physicians should be subjected to the indignity of a Civil-service examination. He says: "The visiting and consulting physicians and surgeons, mentioned in the motion papers, are neither 'officers' nor 'employés' within the meaning of the so-called Civil-service acts. They receive no compensation; their positions, so far as pecuniary benefit is concerned, are purely honorary; and it is inconceivable to me that the Legislature should have intended that the most eminent members of the medical profession should be subjected to the indignity of an examination, either competitive or non-competitive, as a condition precedent to their being permitted to render gratuitous services in the hospitals which are under the control of the city. The objection that the defendants have delegated their appointing power is not tenable. They are under no legal obligation to select their appointees from the whole medical profession. They could appoint only those who had graduated from certain schools or who were of a certain age or who had had different kinds of experience; so they have a right to appoint those who have been nominated in the manner set forth in the motion papers if they see fit. Besides, they are under no legal obligation to confirm such nominees, and are at liberty to appoint others if they prefer to do so."

A DENVER paper says the late Dr. Annie E. Marsh, of Greeley, Colo., bequeathed nearly all her property to the University of Michigan and her body to the University of Colorado. Her possessions included lands in Arizona, Colorado, and the East. Mrs. Marsh's husband carried out her desires as to the disposition of her body, which now lies on the dissecting-table. The University of Michigan, however, has received no intimation of the property bequest. Mrs. Marsh was for a long time a resident of Ann Arbor, and graduated from the medical department there.

AT the request of Dr. Simon Baruch we insert the following correction of a typographical error occurring in the report of his paper in our issue of February 22d, 1896: "On the third line, second column, page 222, giving the mortality of pneumonia under the compress treatment devised by myself and under the usual treatment, the comparative number should be 12 per cent. under the water treatment to 77 per cent. under the ordinary treatment, instead of 12 per cent. to 17 per cent."

THE legislative subcommittee of Maryland appointed to investigate her public institutions has avowed its intention to report unfavorably upon the condition of the Deaf, Dumb, and Blind Asylum of that State. When such committees are moved to disapproval there is usually good reason for their action.

THE managers of St. John's Hospital, in Atlantic and Albany avenues, Brooklyn, one of the five institutions under the direction of the Church Charity Foundation, have made arrangements to open a school for trained nurses. It will be known as the Order of Trained Nurses. A rich friend of the hospital has furnished the money for the establishment of the school. The course will extend over three years.

THIRTY-EIGHT centenarians were recorded in Great Britain last year, fifteen men and twenty-three women. The oldest was Mrs. Henry, of Gortree, who died at 112, leaving a daughter of 9. In the last ten years the *St. James's Gazette* has kept track of 378 centenarians, of whom 143 were men and 235 women.

THE secretary and a committee of members from the Illinois State Board of Health have gone to Chicago to examine the Dunham Medical College, and the American Medical Mission College of Chicago, with a view of ascertaining if their diplomas are eligible for recognition by the Board, as evidence of proficiency on the part of candidates for license to practice in that State. From Chicago the committee will visit Battle Creek, Mich., for a similar purpose.

By bequest of the late Mrs. Mary A. Grayden, of New York city, the sum of \$6000 is donated to the Methodist Episcopal Hospital of Brooklyn, N. Y., and to the New York Home of the same denomination, in equal shares.

THE following staff with their associates and assistants have been unanimously chosen by the Board of Trustees of St. Mary's Hospital, Brooklyn, N. Y., to serve for the ensuing year: Consultants—George R. Fowler, M.D., Jarvis M. Wright, M.D. Special consultants—Diseases of the nervous system, Landon Carter Gray, M.D.; diseases of the eye and ear, Arthur Mathewson, M.D.; diseases of children, Charles Jewett, M.D.; diseases of the skin, W. E. Griffiths, M.D. Consulting laryngologist—Jonathan Wright, M.D. Medical and surgical staff—Department of gynecology—John Byrne, M.R.C.S.(E.), president of the faculty; John C. MacEvitt, M.D., Walter J. Corcoran, M.D. Department of general surgery—John D. Sullivan, M.D., Charles H. Terry, M.D., J. C. Kennedy, M.D., Walter C. Wood, M.D. Department of orthopedic surgery—John C. Schapps, M.D. Department of general medicine—George R. Kuhn, M.D., secretary of the faculty; John Harrigan, M.D., J. S. Waterman, M.D. Department of nervous diseases—Lawrence J. Morton, M.D., R. S. Newton, M.D.

THE medical report of the Adirondack Cottage Sanitarium at Saranac Lake, New York, for the past year states that of the 114 consumptive inmates treated,



twenty-one were apparently cured, in thirty-six the disease was apparently arrested, twenty-seven were apparently improved, twenty-seven were unimproved, and three died. Thirty-two patients were treated by injections of "modified" tuberculin, of which twenty-two were discharged. Of these nine were apparently cured, in eight the disease was arrested, two were improved, two unimproved, and one died from tubercular peritonitis. The list of contributors shows a widespread interest taken by the public in this commendable charity, and the financial statement bears evidence to efficient and economical management.

DR. C. H. TEBAULT, of New Orleans, has been appointed Surgeon-general of the United Confederate Veterans, to fill the vacancy caused by the death of Dr. Joseph Jones.

SEVENTEEN cases of diphtheria in Cecil County, Maryland, have been thought by the physicians in charge to be traceable to an infected cat. Attention also has been called to the supposed fact that nearly all stray cats and dogs are affected by one or more diseases which may or may not be communicable to mankind.

DR. E. B. DELABARRE, professor of psychology at Brown University, has been appointed successor to Dr. Munsterberg as director of the psychological laboratory at Harvard for 1896-7, and has accepted the appointment. He will not, however, be obliged to give up his work at Brown. The laboratory at Harvard is the finest in the country, if not in the world.

## CORRESPONDENCE.

### GLYCERIN EXTRACT OF BONE-MARROW.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: In your issue of March 7th appears an editorial upon the therapeutic use of bone-marrow, in which the writer questions the value of glycerin as a solvent, and says that those persons who have had unsatisfactory results with marrow have used the medullary glyceride. So far as I can learn, there is but one other writer who takes this view of the case. On the other hand, there are a large number of physicians who have had the happiest experiences with the preparation originally advocated by Danforth.

Since I first used the glycerin preparation (considerably over a year ago) I have never had any bad results, and nothing worse than an occasional intestinal colic; and I have given it to many anemic and debilitated people with results that have been in every way gratifying. Of course there are poor preparations, for the process of maceration of the bones and extraction of the marrow is a laborious and slow one, and the temptation to manufacture weak products is very great.

Very truly yours,

ALLEN McLANE HAMILTON, M.D.

NEW YORK, March 8, 1896.

### THE HEARING ON THE ANTIVIVISECTION BILL BEFORE THE JUDICIARY COMMITTEE OF THE MASSACHUSETTS LEGISLATURE, FEB. 27, 1896.

[SPECIAL CORRESPONDENCE TO THE MEDICAL NEWS.]

THE Massachusetts Society for the Prevention of Cruelty to Animals petitioned the Legislature to pass an "Act Relating to Vivisection in Schools" (House 548). A public hearing on the proposed bill was given by the Judiciary Committee of the House, Feb. 27, 1896, at 11 A.M. The following account is extracted from the stenographer's report. All unbracketed words are quoted directly. Great pains have been taken to state fairly all matters of importance.

J. A. BAILEY, Jr., counsel for the petitioners (called attention to the existing act, chapter 151 of the Acts of 1894): The gist of that act is that no teacher shall practice vivisection in the presence of any pupils. We put in with our petition a somewhat elaborate bill, but we have changed our bill very radically. We come before you to-day with a simple bill in two sections.

#### AN ACT RELATING TO VIVISECTIONS IN SCHOOLS.

*Be it enacted, etc.*

Sec. 1. Any agent or agents of the Massachusetts Society for the Prevention of Cruelty to Animals may be present at any experiment on or dissection of any *live* animal in any school or educational institution in this Commonwealth, and shall be permitted to witness the same; and the time and place of any such experiment or dissection shall, upon the request of any such agent, be made known to him by the person having charge of such experiment or dissection.

Sec. 2. Whoever violates this act by preventing any such agent from being present or failing to give any such agent information when requested, as above provided, shall be punished by a fine of not less than twenty dollars nor more than one hundred dollars.

GEORGE T. ANGELL, president of the Massachusetts Society for the Prevention of Cruelty to Animals: The law which we originally presented to you seems to us an eminently fair and proper one, but, on advice of counsel, and after consultation with various friends, we have concluded to drop three of its sections and confine ourselves to the other two. We are told through many articles in the public press and letters from students and others, the writers of which we are not at liberty to disclose, that there is much cruelty to animals in some of our medical and other schools. We simply ask that our agents—every one of whom shall, if desired, be furnished with a first-class certificate from his clergyman, or his lawyer if preferred, that he is a truthful man, of good moral character—may be present at these operations on *live* animals. (Witness now read extracts from the annual address before the Massachusetts Medical Society by Dr. Henry J. Bigelow, of which a fair idea may be given by the expressions: "Horrors of vivisection;" "Spinal marrow, the seat of all that is concentrated and exquisite in agony;" "The ruffled feathers of a pigeon deprived of his cerebellum may indicate not so much a specific action of the cerebellum on the skin as the more probable fact that the poor bird feels sick;" "My heart sickens as I recall the spectacle at Alfort in former times; a wretched horse

bound upon the floor and every conceivable and fiendish torture inflicted upon him, while he groaned and gasped;" "The limit of physiological experiment, in its utmost latitude, should be to establish truth in the hands of a skilful experimenter with the greatest economy of suffering, and not to demonstrate it to ignorant classes and encourage them to repeat it.")

(Witness then presented "a letter from a student" [Boston *Evening Transcript*, May 25, 1895], in which these words occur: "Then let it at once be known that it is the opinion of over four-fifths of the students of one of our largest medical schools that work in practical physiology on living animals is obnoxious, debilitating, and comparatively profitless; . . . not intensely interesting even to the earnest and scientific student is the sight of a small dog, weak with the loss of blood, running about the laboratory with a cork stopper in his neck. The object of this is to see how far they can carry certain experiments and have the dog still live.")

I do not know the name of this student, but I have given you his letter as printed in the *Transcript*. Gentlemen, we simply ask that the best agents we are able to furnish and employ shall have the privilege of being present wherever operations on live animals are performed, in order that we may satisfy ourselves that the laws for the prevention of cruelty to animals are not violated.

*Cross-examination.*—Q. What tests do you apply, if any, for the appointment of your agents? A. We select from the very best men we can get; for the last of those appointed we studied the list of the Boston police and selected a man. The captain said there was no better man on his force. We usually give some preference to men of experience in enforcing the laws. Q. But men of no scientific education? A. We can't afford to pay scientific men, you know; the dumb animals have not money enough to get very scientific men. Q. Do you take the ground that vivisection is unnecessary? A. I came here to say what these animals would say if they could talk. They would all vote against it to a man. Q. Are you familiar with experiments upon animals in these schools? A. No. Q. Are you yourself aware of any abuse or cruelty practiced on the animals? A. Only through reports and publications. Q. Your opinion, then, is formed on evidence which has been brought to you by published newspaper accounts? A. And by statements of students in medical schools and other persons. Q. Then you have never asked to be allowed personally to be present? A. No. Q. Have you evidence of specific acts of cruelty? A. I think some of these gentlemen have. I have invited certain gentlemen here who have expressed great sympathy. I don't know what they will say. Q. The purpose of the act is to select any agent, paid or unpaid? A. Yes. Q. This bill is promoted by the society or yourself? A. By the society, of course. Q. Has the society taken any action in regard to this bill? A. It has been brought before the directors. (In answer to repeated questions, witness was brought to say that the proposed bill was discussed at a directors' meeting, at which only seven out of the twenty-four directors of the society were present, and was "sanctioned" by the seven, including

himself. Neither he nor Vice-President Hill could "remember whether any formal action was taken. The president had authority to take charge of the work of the society. The specific thing done here was done very largely under his general authority as president. A good many of the people who supported his society were intensely interested against vivisection. He supposed some would like to stop it and some would not, but he could not tell.") Q. Your expectation would be that you could get, if this bill were passed, such information that you could secure prohibition of vivisection? A. I will say that the dumb animals hope it would be prohibition. Q. Have you not published an offer of a reward for evidence of the abuse of the practice of vivisection? A. Yes, I have had a standing offer in *Our Dumb Animals*, which goes to almost every professional man in the State, an offer of \$100 reward for evidence which will enable us to convict any man in Massachusetts of any violation of the law in the practice of vivisection. Q. Have you procured any? A. No. Q. If your agent reported that pain was inflicted in a certain experiment, would you consider that that report would be something to be acted on? A. The only question would be whether there was sufficient torture to the animals to warrant a complaint. The agent could report what he saw and heard, and it would remain with the judge whether he should grant a warrant or not.

Dr. ALBERT LEFFINGWELL, of Cambridge: My experience as a physician and my experience in looking into this question convince me that vivisection has been of great service to humanity, and that, within limitations, there is no danger in its continuance. I believe in vivisection with certain limitations, but think it should be guarded against abuse; this bill is nonsense if there is no such a thing as abuse. (An extract was then read from an address by Dr. Parvin: "There are some who seek useless knowledge, and who seem to be blind to the writhing agony and terrible pain of their victims, and who are guilty of the most damnable cruelty. These criminals are not alone found in or confined to Germany or France, but may be found in our own country." Names were mentioned of physicians who favored the restriction of vivisection by law. Accounts of cruelty in Europe were given.)

*Cross-examination.*—Q. Do you feel that the agents of this society, with the qualification described by the president of the society, would be competent and a safe body to be the consors of the colleges of this Commonwealth? A. Not censors, but proper witnesses. Q. You have read some very harrowing descriptions of what goes on in Paris; tell us whether in your opinion that is a fair and just description of what goes on in Massachusetts? A. I am not personally acquainted with what happens in Massachusetts. I can't get into medical schools and laboratories. Q. Have you tried? A. No, I have tried in New York. Q. Have you tried in Massachusetts? A. No, it is said that no one would be allowed to go. Q. I understood you to say that unless there are abuses this bill is nonsense; have you any evidence of any abuse in Massachusetts? A. The abuses are simply these: that students are allowed occasionally

to practice vivisection on animals for their own purposes. I don't think it would be considered abuse by those having it in charge. Q. Are you sure that that is the fact? A. No, sir; only Mr. Angell says so. Q. Then I understand you have no evidence of any abuse? A. Not in this State; only that those doors are closed. Q. In your opinion could these experiments be properly conducted in the presence of agents of the societies? A. I think so; certain experiments could be. Q. Would that apply to all experiments? A. No; persons must exercise common-sense.

Mr. PHILIP G. PEABODY, president of the New England Antivivisection Society: I hold in my hand a list of physicians, I think several hundred, who are in favor of the abolition of vivisection. (Mr. Peabody here quoted several names therefrom.) The bill has been very carefully treated by those who have preceded me, and I will not spend any time upon that.

*Cross-examination.*—Q. Do you favor this particular bill or not? A. I do favor this bill, but I should like to have it altered so that the agents of the Antivivisection Society should be allowed the same privilege of witnessing the experiments as those of other societies. If the people of Massachusetts had the remotest idea of what vivisection really means, it would not be tolerated one month. I have seen vivisection in many instances, and I have never seen any anesthetics used. I think the anesthetics are for the public. Q. Have you observed those experiments in this State? A. I have never been permitted to observe them in this State. Q. Do you feel that a person who goes to see an operation with his mind all ready prejudiced against the whole question, a member of a society whose avowed purpose is to exterminate vivisection, is a proper man to go to such a place? A. Yes. (Witness now said in answer to questions, that he had been engaged in investigating these matters ten years, had published a good deal in the newspapers and elsewhere, and had got all the evidence bearing on this question that he could reasonably get.) Q. Have you any evidence showing any abuses in Massachusetts? A. Yes. Gentlemen come to my office almost every day and give me information concerning this, but say they don't want to be expelled from the school that they attend, as they would be if they were known to have stated these things. In a medical school in this State they take guinea-pigs in handfuls, two or three at a time, and crowd them into a vessel with a sponge of chloroform, and jam them down and put on a cover to the vessel, and sometimes the legs protrude and no pains are taken to put the legs in. (Witness declined to state where this occurred.) I have heard of many experiments performed without anesthetics. Q. Have you any other evidence? A. No. Q. You yourself have not seen any experiments on live animals in Massachusetts? A. No. Q. You were not permitted to? A. No. Q. Have you asked? A. I asked at the Harvard Medical School. (Witness being questioned further stated that six or seven years ago he had asked to see the experiments on animals, and was told none took place there. He did not know the location of the school, nor whether the person asked was an officer of

the school. Thought that it was at the front door. Should say that the person asked was the janitor, not a professor. Had not been there since. Did not at that time represent the society, but went as a person interested in the subject. Could not remember that he had asked for the professor in charge of that department. Did not think he knew who the professor was at that time.) Q. Is that the only evidence you have on which to base your statements that you have been refused admission to these operations in medical schools in Massachusetts? A. Yes, the only personal evidence.

Dr. EUGENE W. HILL, of Newton. (Spoke in favor of the bill, though not opposed to vivisection. Thought that the bill would prevent unauthorized vivisection by students.)

*Cross-examination.*—Q. Have you any evidence that any abuses are practiced in Massachusetts in vivisection? A. Not in the laboratories; but I have been told that rabbits have been taken and tied up by the heels and hung out of the windows. (Witness said also that he had heard of students torturing guinea-pigs in barns.) If an agent goes into these laboratories he can tell very quickly those students who propose to go out and experiment by themselves. Q. How about this case you speak of—of students torturing guinea-pigs in barns; how could an agent help that; do you think he would learn in the school that a student was going to do such a thing in a barn? A. No, but I think he would learn the drift of the students' minds. Q. Does not the (existing) law provide for the suppression of this kind of cruelty? A. Yes, but it must be proved.

Mr. P. D. RICHARDS, of West Medford. (Not a physician; of no particular business. Spoke as a member of the community. Read from a manuscript so indistinctly that he could not be reported. He was understood to relate cruelties practiced in Europe, and to attack professors in the Harvard Medical School because of their alleged misrepresentation of facts. He spoke of persons in Ohio who had petitioned the legislature to permit vivisection of criminals. The vivisectioners would be after paupers and babies next; babies because they were easy to handle.)

*Cross-examination.*—The CHAIRMAN: Are there any questions to be asked of this gentleman? (Silence of several minutes.) Mr. RICHARDS: No questions? Perhaps it is just as well that they don't ask me any questions about the Harvard Medical School or the Boston University. Q. You have something to say about the Harvard Medical School? A. I can tell of the open doors which Dr. W. T. Porter speaks of in his letter. (Replying to various questions, witness stated that he had applied for permission to be present at vivisections in the Harvard Medical School, and had been referred to the dean. On writing the dean, a secretary replied that he was in Europe and referred him to some one else, who, when witness wrote, had also gone to Europe. Had written also to the Boston University, and to Gen. Walker at the Institute of Technology. The Boston University had replied "that the doors were not open to morbid curiosity." Gen. Walker had answered



"that we were not competent to inquire into the matter and were not permitted to go there.") Q. What reason did you state in any of those letters for wishing to visit the laboratories? A. I can't say, but they could naturally infer from my articles in the papers that it was for inquiring into cruelties. Q. Are you acquainted with Dr. Richardson or Dr. W. T. Porter? A. Yes, sir. He lied to me; they all lie: all that I have met; all of them lie. Q. What are your grounds for arraigning these doctors simply because they did not want to gratify a morbid curiosity? Don't you think in the case you have stated it was a proper refusal? A. No. I met with no refusal in Cambridge, and no honest person would be refused. Q. The man who invited you knew something personally of you? A. Yes. Q. Doesn't that make an entirely different case, where a man knows the person who makes the application for such a privilege? A. Yes. Q. You are an opponent to vivisection in any form? A. Yes, a strong opponent. Q. And in the same way you are opposed to vaccination? A. Yes, I am opposed to that. Q. How many times have you been to the Harvard Medical School? A. Three or four times, including the stock-room for housing the animals. Q. How did you happen to go in there? A. I was passing the alleyway and saw them going in, and I took the opportunity to go in. I followed the cart. I went in like a man. Q. At that time you went in the back door, and after that went to the front door? A. Yes. Q. You met Dr. Porter, did you not? A. Yes. Q. And had a long conversation? A. Yes. He said they only used curs in their experiments, but immediately after that one of the students told me they used Newfoundland dogs.

Mr. BAILEY, Counsel for petitioners: I wish to say that counsel regrets keenly that any epithet should have been applied to so honorable a body of gentlemen as the instructors of the Harvard Medical School.

Mr. WINSLOW W. FIFIELD, of Malden: I am in the real-estate business and have been for years, and am also a justice of the peace. I am a friend of the dumb animals. Mr. BAILEY: Do you wish to testify to any facts known to yourself or on information given you? WITNESS: No, I do not, only I speak for the dumb animals. I would be one to contribute to a fund which should be used to employ Prof. Garner to go into the kennels of Massachusetts and learn the language of the animals there. The CHAIRMAN: We cannot go as far as that. (No questions were asked this witness.) Mr. BAILEY: I think we will rest here. The CHAIRMAN: Then at the next meeting we will hear the remonstrants to the bill.

ANOTHER wing to the Free Hospital for Women, situated at Brookline, Mass., was opened last week with appropriate ceremonies.

THE CULLES' HOME FOR CONSUMPTIVES, of Boston, Mass., is meeting with great opposition from residents in the vicinity of its proposed location. The selection of Grove Hall has aroused objections, not only from those living near, but also from the park commissioners of that city.

## SOCIETY PROCEEDINGS.

### THE NEW YORK ACADEMY OF MEDICINE.

#### Section on Obstetrics and Gynecology.

Stated Meeting, Feb. 27, 1896.

W. R. PRYOR, M.D., CHAIRMAN.

#### THE INDICATIONS AND SURGICAL TREATMENT OF RETRODISPLACEMENTS OF THE UTERUS.

The discussion was introduced by three papers: The first by Dr. Mundé (see page 281), presenting the indications for the Alexander operation; the second by Dr. Edebohls (see page 282), treating of ventral fixation; and the third by Dr. Vineberg (see page 287), advocating vaginal fixation.

#### DISCUSSION.

DR. NOBLE, of Philadelphia, said that if he looked at the subject solely from the point of view of the gynecologist, he would prefer suspensio uteri as being both safe and efficient, but from the standpoint of the obstetrician not so much could be said in favor of the operation. He had met with two cases in which serious distocia had resulted from the obstruction produced by the uterus at the pelvic brim after this operation. In one of these cases it had been necessary to do a Porro operation. As he was now engaged in collecting statistics regarding the complications of pregnancy and labor which follow ventral fixation, he would for the present suspend judgment. He thought any surgeon should be able to do Alexander's operation, particularly if he adopted the plan of opening up the inguinal canal. In certainly 90 per cent. of the cases ordinarily demanding a ventral fixation, the patients were over 40 years of age, so that it could hardly be said that the question of the effect of the operation on a possible subsequent pregnancy played a very important part. A very slight attachment of the uterus to the abdominal wall by sutures might give more favorable results. He had not been able as yet to see the advantages of vaginal fixation.

DR. H. J. BOLDT said that the operation *par excellence* for cases of retrodisplaced but mobile uterus was that of shortening the round ligaments. At one time he had thought quiet favorably of the operation of vaginal fixation, but now in the very class of cases in which he had formerly advocated vaginal fixation he preferred to do Alexander's operation. In cases of firm posterior adhesions, an effort was sometimes made to break up these adhesions and then shorten the round ligaments, but he felt that it was doubtful if these adhesions were usually broken up with sufficient thoroughness to allow of the uterus remaining permanently in the anterior position; hence in such cases he preferred to do a ventral fixation. Although in two of his cases one of the round ligaments had broken, the remaining one had proved equal to the task of maintaining the uterus in good position. No definite rule could be laid down regarding the number of inches that the round ligaments should be shortened; usually the ligament was shortened until the horn of the uterus appeared at the internal ring.

DR. ILL said that in his opinion Alexander's operation

was indicated in all cases of retrodisplacement of the uterus in which, for any reason, treatment by a pessary was ineffectual. He had done about ninety ventral fixations, and had not seen a case of hernia following this operation. Three of his patients had afterward passed through pregnancy without any complication. He had been informed that fifteen cases of hernia, due to the operation of shortening the round ligaments, had been operated upon last winter at the Hospital for Ruptured and Crippled.

DR. J. RIDDLE GOFFE said that it had been his practice until recently to treat cases of retroversion, with or without adhesions, by shortening the round ligaments. Where there had been adhesions he had first opened Douglas' pouch and broken up these adhesions before shortening the ligaments. The only objections to this treatment had been the unpleasant scars, and he thought even this difficulty could be removed, by resort to vaginal fixation. From what experience he had already had with the latter operation he was willing to assert that it accomplished an anatomical cure in a very satisfactory way, but, of course, one could not deny that the reports from abroad regarding the effect in subsequent pregnancies was rather discouraging. As the anterior vaginal wall was invariably shortened in cases of long standing retroversion, thus interfering with throwing the cervix backward into the hollow of the sacrum and allowing the fundus to come forward, he had adopted the transverse incision.

DR. E. B. CRAGIN said that during the last few months he had done fifteen vaginal fixations, but he had met with a number of failures, and had not been very favorably impressed with the operation. In the future he would probably perform it only as a supplement to work already done by the vaginal route.

DR. A. PALMER DUDLEY said that he did not think Alexander's operation was indicated unless the surgeon could feel sure that not only the uterus but the appendages were non-adherent and not diseased. If there were doubt on this point—and there was very apt to be—he would prefer to perform abdominal section and determine the actual condition present. In performing ventral fixation he did not consider it necessary to insert salmon-gut sutures—indeed, it was not the sutures that kept the uterus in its anterior position, but the action of the weight of the abdominal organs after the uterus had been placed anteriorly. If, after breaking up the adhesions through an incision in the cul-de-sac the uterus was restored to proper position, it could be held there by proper gauze packing without further operative measures.

DR. H. L. COLLYER said that in many cases of pregnancy occurring after Alexander's operation the ligaments had been ruptured or a miscarriage had resulted. He had followed three cases of hysterorrhaphy in which abortion had resulted from the uterus being unable to rise up out of the pelvis. It seemed to him that vaginal fixation was the best of the operations under discussion.

DR. JOSEPH BRETTAUER said that he had been inclined to think that, although vaginal fixation was not ordinarily indicated, it might prove useful in cases of congenital retroversion, but Dr. Vineberg had stated this

evening that it was in just this class that vaginal fixation was contra-indicated.

DR. C. B. WHITE favored Alexander's operation in cases of backward displacement or prolapse in unmarried women; but if the tubes and ovaries were diseased, it might be better to shorten the round ligaments by opening the abdomen.

DR. A. E. GALLANT referred to the pain sometimes experienced after too great shortening of the round ligaments.

THE CHAIRMAN said that he believed that if there were no adhesions these cases could be cured by plastic operations alone. Following in the lead of Dr. Hentzen, of Chicago, he had recently been doing some surgery through the cul-de-sac, and felt that he had obtained some cures in this way. Of the three operations under discussion, he preferred the Alexander operation, because it raised the uterus at the same time that it placed it anteriorly.

DR. EDEBOHLS said that on theoretical grounds he could not see that modifications of the method of operating should materially affect the result, because it was beyond our power to control the strength of the peritoneal adhesions that formed. Of the three operations, Alexander's was the only one which left the uterus free and unattached by peritoneal adhesions. There was nothing on record to show that after Alexander's operation there was any trouble in subsequent pregnancies. As much could not be said for the still very young operation of vaginal fixation.

DR. VINEBERG said that he desired to correct an impression that seemed to exist regarding Mackenrodt's operation. Mackenrodt certainly had not abandoned the operation which bears his name, for in his very last paper he refers to various favorable opinions that had been expressed regarding it by certain eminent surgeons abroad. He had only changed the technique. The speaker said that recent statistics showed that there was quite a large percentage of failures after Alexander's operation, and that the mortality was as high as 5 per cent. He felt that enough emphasis had not been laid upon the great danger of hernia after this operation, or after the operation of shortening the round ligaments by opening the abdomen. He could not but think that it was not good surgery to open the abdomen and produce one weak point, and then do an Alexander's operation, thus making two additional weak spots.

## SOCIETY MEETINGS.

### THIRD INTERNATIONAL CONGRESS OF DERMATOLOGY.

To be held in London, August 4th to 8th, 1896.

#### PROGRAM.

TUESDAY, AUGUST 4TH—PRELIMINARY BUSINESS.

12.00 M. Presidential Address.

3 P.M. Subject: "Prurigo."

1. Dr. Besnier (Paris).

2. Prof. Kaposi (Vienna).

3. Dr. J. C. White (Boston).

4. Dr. Payne (London).

## WEDNESDAY, AUGUST 5TH.

9.00 A.M. Clinical Demonstration of Cases.

## DERMATOLOGY.

10.30 A.M. Subject: "The Etiology and Varieties of Keratosis."

1. Dr. Unna (Hamburg).
2. Dr. H. G. Brooke (Manchester).
3. Prof. V. Mibelli (Parma).
4. Dr. W. Dubreuilh (Bordeaux).

3 P.M. Papers.

## SYPHILIS.

10.30 A.M. Subject: "Syphilitic Reinfection."

1. Prof. Fournier (Paris).
2. Prof. Lang (Vienna).
3. Mr. Alfred Cooper (London).
4. Dr. Fitzgibbon (Dublin).

3 P.M. Papers.

## THURSDAY, AUGUST 6TH.

9 A.M. Clinical Demonstration of Cases.

## DERMATOLOGY.

10.30 A.M. Subject: "The connection of Tuberculosis with Diseases of the Skin other than Lupus Vulgaris."

1. Dr. J. Nevins Hyde (Chicago).
2. Dr. Hallopeau (Paris).
3. Dr. Radcliffe Crocker (London).
4. Dr. G. Riehl (Vienna).

## SYPHILIS.

10.30 A.M. Subject: "The Duration of the Period of Contagion of Syphilis."

1. Mr. Hutchinson (London).
2. Prof. Campana (Rome).
3. Prof. Lassar (Berlin).
4. Dr. Feulard (Paris).

2.00 P.M. Subject: "Ringworm and the Tricophytons."

1. Dr. Sabouraud (Paris).
2. Prof. Rosenbach (Göttingen).
3. Mr. Malcolm Morris (London).

Many contributions to this debate promised.

## FRIDAY, AUGUST 7TH.

9.00 A.M. Clinical Demonstration of Cases.

## DERMATOLOGY.

10.30 A.M. Subject: "The Nature and Relations of the Erythema-multiforme Group."

1. Prof. de Amicis (Naples).
2. Dr. T. H. Veiel (Stuttgart).
3. Dr. P. A. Morrow (New York).
4. Dr. Stephen Mackenzie (London).

## SYPHILIS.

10.30 A.M. Subject: "Malignant Syphilis."

1. Prof. Handlung (Copenhagen).
2. Prof. Neisser (Breslau).
3. Prof. Tarnovsky (St. Petersburg).

2.00 P.M. Clinical Demonstration of Cases.

## DERMATOLOGY.

3.00 P.M. Papers.

## SYPHILIS.

3.00 P.M. Papers.

## SATURDAY, AUGUST 8TH.

9.00 A.M. Clinical Demonstration of Cases, followed by Papers.

NOTE.—The Congress has been fortunate enough to secure for its use the building known as Examination Hall, on the Victoria Embankment. This will afford every facility for all kinds of demonstrations: cases, pictures, museum, etc. Special efforts are being made to have large clinical demonstrations of cases, and all who have been in London know how rich is the material there. It is of the greatest importance that those intending to join the Congress should notify the Secretary, Dr. J. J. Pringle, 23 Lower Seymour street, London, W., of their intention as soon as possible. The membership fee is £5, which should be sent in the form of a one-pound sterling draft on London, or P. O. order to the same amount.

GEO. THOS. JACKSON,

14 East 31st street, New York,

Secretary for the United States.

## PRELIMINARY PROGRAM OF THE ANNUAL MEETING OF THE TRI-STATE MEDICAL SOCIETY.

To Be Held in Chicago, April 7, 8, and 9, 1896.

Dr. Nicholas Senn, Surgical Clinic; Dr. John B. Murphy, Surgical Clinic; Dr. J. H. Etheridge, Gynecological Clinic; Dr. F. Henrotin, Gynecological Clinic; Dr. J. M. Mathews, Louisville, public address; Dr. J. J. M. Angear, Chicago, subject unannounced; J. R. Ash, Brighton, Ill., subject unannounced; Frank Allport, Minneapolis, subject unannounced; Wellington Adams, St. Louis, "A New and Practical Method of Opening and Dilating the Eustachian Tube"; J. J. Brownson, Dubuque, Ia., "Chest Drainage in Empyema"; J. M. Ball, St. Louis, "Eye Symptoms in Brain Tumor"; G. W. Barr, Quincy, Ill., "The Use of Patent Medicines"; G. Wiley Broome, St. Louis, "The Diagnosis and Surgical Treatment of Cancer of the Cervix"; D. C. Brockman, Ottumwa, Ia., "Points in Surgical Practice"; A. H. Cordier, Kansas City, "Pregnancy Complicated by Cancer of the Cervix—Report of Case"; G. W. Cale, St. Louis, "Surgical Treatment of Brain Tumor"; F. B. Dorsey, Keokuk, Ia., "Fracture of Pelvis, Complicated with Pregnancy"; L. H. Dunning, Indianapolis, subject unannounced; C. Travis Dreeneen, Hot Springs, Ark., "Gonorrhoeal Rheumatism"; H. C. Eschbach, Albia, Ia., "Colles Fracture"; R. C. Heflebower, Cincinnati, "Foreign Bodies in Crystalline Lens" and "The Ophthalmoscopic Findings in Reynaud's Disease"; Webb J. Kelly, Galion, O., "The Treatment of Unreduced Fractures of the Lower End of the Radius"; Emory Lanphear, St. Louis, subject unannounced; Merrill Ricketts, Cincinnati, "Anal Fistula; Peritonitis; Laparotomy; Recovery"; Adolph Meyer, Worcester, Mass., "Etiological, Clinical, and Pathological Factors in Diagnosis and Rational Classification of the Infectious and Toxic Diseases of the Peripheral Nerves, Spinal Cord, and Brain"; C. B. Nancrede, Ann Arbor, Mich., "The Operative Treatment of Jacksonian and Focal Epilepsy as Illustrated by Selected Cases"; Paul Paquin, St. Louis, "Some Recent Criticism on the Serumtherapy"; Roswell Park, Buffalo, N. Y., "Auto-infection in Surgical Cases"; J. F. Percy, Galesburg, Ill., "Special Education as a Means of Treatment in Chronic Neurasthenia"; John Puntun, Kansas City, subject unannounced; F. Reder, Hannibal, Mo., "Remarks on a Partial Dislocation of the Axis"; D. S. Reynolds, Louisville, "Local Treatment of the Eye"; R. Harvey Reed, Columbus, O., subject unannounced; E. O. Sisson, Keokuk, "Ulcerative Inflammation of the Cornea"; T. O. Summers, St. Louis, "Leucocytosis: Its Relation to Modern Therapy"; W. W. Wathen, Louisville, "Pathology of Cystic Tumors of the Ovary and Broad Ligaments"; O. B. Will, Peoria, "Dysuria in the Female"; Alex. Hugh Ferguson, Chicago, "Pylorotomy in America"; D. R. Brower, Chicago, "Anemia and Its Relation to the Nervous System, with Suggestions as to Treatment"; John Ridlon, Chicago, "Flat-feet"; J. B. Bacon, "Conservative Surgery in the Treatment of Hemorrhoids"; Weller van Hook, Chicago, subject unannounced; Wm. Allen Pusey, Chicago, subject unannounced; Arthur Edwards, Chicago, subject unannounced; Frank Billings, Chicago, subject unannounced; Gustav Fuetterer, Chicago, subject unannounced; T. J. Shuell, Parnell, Ia., "The Relation of Fecal Impaction to Appendicitis"; Dr. Otto Sutter, St. Louis, subject unannounced; Dr. A. E. Mink, St. Louis, subject unannounced; Dr. G. H. Thompson, St. Louis, subject unannounced; Dr. Harry Wells, St. Louis, subject unannounced; W. C. Ussery, St. Louis, subject unannounced.